

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sin J. Lee Examiner #: 76060 Date: July 19, 2004
 Art Unit: 1752 Phone Number 302-1333 Serial Number: 10/803,393
 Mail Box and Bldg/Room Location: 9D60 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Photosensitive Composition for Manufacturing optical Waveguide Production Method thereof and Polymer optical Waveguide pattern Formation Method using the same.

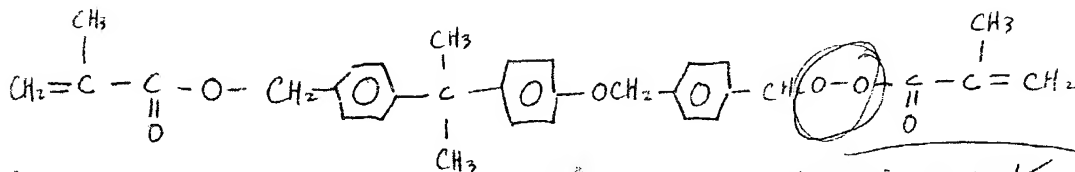
Inventors (please provide full names):

Toyoda, Seiji ; Imamura, Saburo ; Tomaru, Satoru ; Kurihara, Takashi ;

Earliest Priority Filing Date: 3-18-2004 Enbutsu, Koji ; Hayashida, Shoichi ; Maruno, Tohru.

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

- Please search for an oligomer represented by the following formula, combined with a photopolymerization initiator



* This may be an error. I searched it both ways as a peroxide & as an ester. No structures found

STAFF USE ONLY

Fuller Type of Search Vendors and cost where applicable
 Searcher: _____ NA Sequence (#) _____ STN _____
 Searcher Phone #: _____ AA Sequence (#) 2 Dialog _____
 Searcher Location: _____ Structure (#) _____ Questel/Orbit _____
 Date Searcher Picked Up: 7/20/04 Bibliographic _____ Dr. Link _____
 Date Completed: 30 Litigation _____ Lexis/Nexis _____
 Searcher Prep & Review Time: _____ Fulltext _____ Sequence Systems _____
 Clerical Prep Time: 27 Patent Family _____ WWW/Internet _____
 Online Time: _____ Other _____ Other (specify) _____
Subert

SEARCH REQUEST FORM**Scientific and Technical Information Center**

Requester's Full Name: Sin J. Lee Examiner #: 76060 Date: 7-19-'04
 Art Unit: 1752 Phone Number 302-1333 Serial Number: 10/803,393
 Mail Box and Bldg/Room Location: 9D60 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Photosensitive Composition for Manufacturing optical Waveguide
Production Method thereof and polymer optical waveguide
Pattern Formation Method using the same

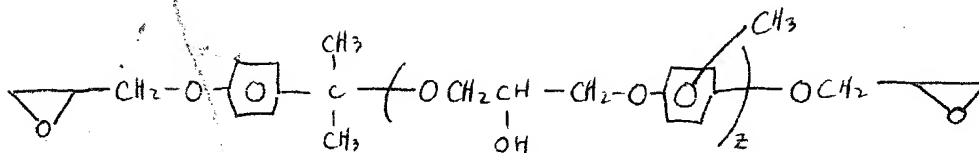
Inventors (please provide full names):

Toyoda, Seiji; Imamura, Saburo; Tomaru, Satoru; Kurihara, Takashi;
Enbutsu, Koji; Hayashida, Shoich
Maruno, Tohru.

Earliest Priority Filing Date: 3-18-2004

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

- Please search for an oligomer represented by the following formula, combined with a photopolymerization initiator.



* (z = 0 to 2)

STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>K. Fuller</u>	NA Sequence (#) _____	STN <u>✓</u>
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) <u>2</u>	Questel/Orbit _____
Date Searcher Picked Up: _____	Bibliographic _____	Dr.Link _____
Date Completed: <u>7/20/04</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>30</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: <u>27</u>	Other _____	Other (specify) _____

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sin J. Lee Examiner #: 76060 Date: July 16, 2004
Art Unit: 1752 Phone Number 301-2-1333 Serial Number: 10/803,393
Mail Box and Bldg/Room Location: 9066 Results Format Preferred (circle): PAPER DISK E-MAIL

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Title of Invention: Photosensitive Composition for Manufacturing optical Waveguide, Product Method thereof and Polymer Optical Waveguide Pattern Formation Method using the same

Inventors (please provide full names):

Toyoda, Seiji; Imamura, Saburo; Tomaru, Satoru; Kurihara, Takashi; Enbutsu,Earliest Priority Filing Date: 3-18-2004 Hayashida, Shoichi; Maruno, Tohru

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

— Please search for the oligomer represented by

Formula (5) in the attached Claim # 15,

combined with a polymerization initiator (or photoinitiator or photopolymerization initiator).

STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>R. Teller</u>	NA Sequence (#) _____	STN <u>✓</u>
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
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Date Searcher Picked Up: _____	Bibliographic _____	Dr. Link _____
Date Completed: <u>7/20/04</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>30</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: <u>28</u>	Other _____	Other (specify) _____

=> FILE REG

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STRUCTURE FILE UPDATES: 19 JUL 2004 HIGHEST RN 713066-32-1
DICTIONARY FILE UPDATES: 19 JUL 2004 HIGHEST RN 713066-32-1

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

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=> FILE HCAPLUS

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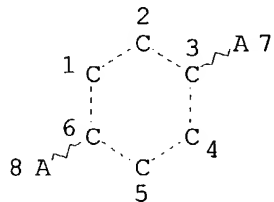
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FILE COVERS 1907 - 20 Jul 2004 VOL 141 ISS 4
FILE LAST UPDATED: 19 Jul 2004 (20040719/ED)

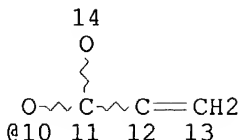
This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> D QUE

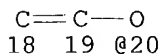
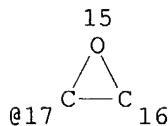
L1 STR



G1 9



G2 21



14, 571 structures from the query

VAR G1=10/17/20
VAR G2=10/17/20
NODE ATTRIBUTES:
NSPEC IS RC AT 7
NSPEC IS RC AT 8
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 21

STEREO ATTRIBUTES: NONE

L8 SCR 1992

L10 SCR 2021

L12 SCR 1918

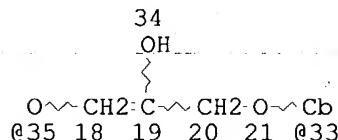
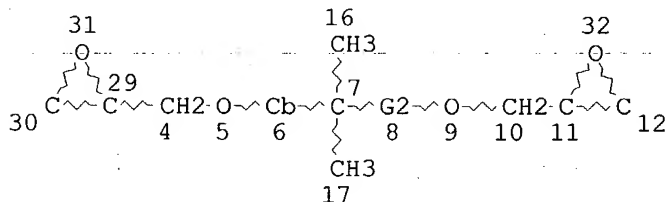
L14 SCR 1838

L16 SCR 17 OR 41 OR 470

L18 14571 SEA FILE=REGISTRY SSS FUL L1 AND L14 AND L16 NOT (L8 OR L10 OR L12)

L53 STR

Subset



REP G2=(0-2) 35-7 33-9

NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

2 structures

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 22

STEREO ATTRIBUTES: NONE

L58 2 SEA FILE=REGISTRY SUB=L18 SSS FUL L53

L59 1 SEA FILE=HCAPLUS ABB=ON L58

ICA reference

=> D ALL HITSTR

L59 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1994:303314 HCAPLUS
 DN 120:303314
 ED Entered STN: 11 Jun 1994
 TI Nonaqueous-electrolyte secondary battery
 IN Sasaki, Takashi; Makuchi, Keizo; Takeda, Kazunari; Ido, Shuichi
 PA Japan Atomic Energy Res Inst, Japan; Yuasa Battery Co Ltd
 SO Jpn. Kokai Tokkyo Koho, 10 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM H01M010-40
 ICS H01M004-02
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05326019	A2	19931210	JP 1992-127291	19920520
PRAI	JP 1992-127291		19920520		

AB A secondary battery comprises: (a) a composite cathode containing an active mass and a polymer having a polyether structure and containing a substance having ion conductivity; (b) an anode; and (c) an electrolyte from a polymer having a polyether structure and containing a substance having ion conductivity, where the polymer in the cathode and/or electrolyte is formed by irradiating with ionizing radiation. The anode can also contain an active mass and a polymer having a polyether structure and containing a substance having ion conductivity. The battery has high safety and long-term reliability.

ST nonaq electrolyte secondary battery safety; polyether electrode lithium battery

IT Safety
(of nonaq.-electrolyte secondary battery)

IT Electron beam
(polymer formation with, in preparation of electrodes and electrolyte of lithium battery)

IT Anodes
Cathodes
(battery, polymer having polyether structure and containing ion-conductive compound in, for lithium battery)

IT Polyethers, uses
RL: USES (Uses)
(epoxy-polyester-, cathode containing lithium tetrafluoroborate-filled, in lithium battery)

IT Polyesters, uses
RL: USES (Uses)
(epoxy-polyether-, cathode containing lithium tetrafluoroborate-filled, in lithium battery)

IT Radiation
(ionizing, polymer formation with, in preparation of electrodes and electrolyte of lithium battery)

IT Epoxy resins, uses
RL: USES (Uses)
(polyester-polyether-, cathode containing lithium tetrafluoroborate-filled, in lithium battery)

IT 155380-51-1 155380-53-3
RL: USES (Uses)
(cathode containing lithium tetrafluoroborate-filled, in lithium battery)

IT 14283-07-9, Lithium tetrafluoroborate

RL: USES (Uses)

(polyether filled with, in cathode of lithium battery)

IT 155380-51-1

RL: USES (Uses)

(cathode containing lithium tetrafluoroborate-filled, in lithium battery)

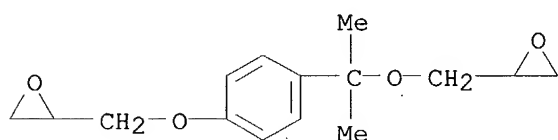
RN 155380-51-1 HCAPLUS

CN Hexanedioic acid, bis(7-oxabicyclo[4.1.0]hept-3-ylmethyl) ester, polymer with dihydro-2(3H)-furanone and [[4-[1-methyl-1-(oxiran-2-ylmethoxy)ethyl]phenoxy]methyl]oxirane (9CI) (CA INDEX NAME)

CM 1

CRN 17263-52-4

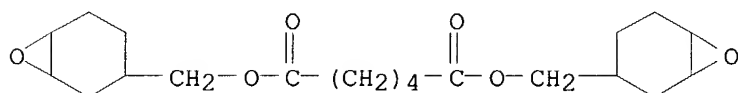
CMF C15 H20 O4



CM 2

CRN 3130-19-6

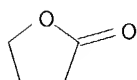
CMF C20 H30 O6



CM 3

CRN 96-48-0

CMF C4 H6 O2



=>

=> FILE REG

FILE 'REGISTRY' ENTERED AT 14:43:43 ON 20 JUL 2004

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DICTIONARY FILE UPDATES: 19 JUL 2004 HIGHEST RN 713066-32-1

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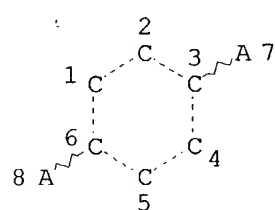
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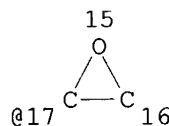
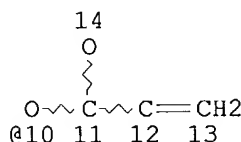
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> D QUE

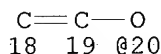
L1 STR



G1 9



G2 21



14, 571 structures from query

VAR G1=10/17/20

VAR G2=10/17/20

NODE ATTRIBUTES:

NSPEC IS RC AT 7

NSPEC IS RC AT 8

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 21

STEREO ATTRIBUTES: NONE

L8 SCR 1992

L10 SCR 2021

L12 SCR 1918

L14 SCR 1838

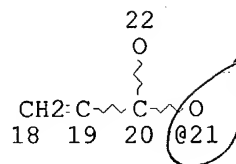
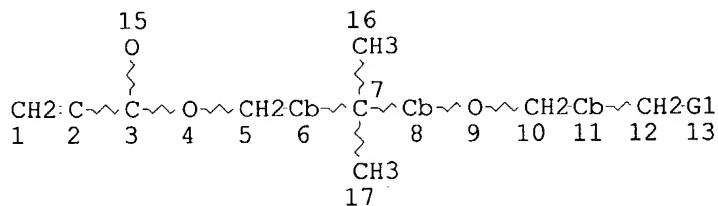
L16 SCR 17 OR 41 OR 470

L18 14571 SEA FILE=REGISTRY SSS FUL L1 AND L14 AND L16 NOT (L8 OR L10 OR

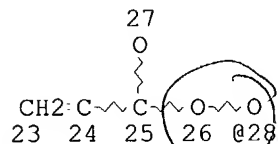
Subset

L49

L12)
STR



ester



peroxy

VAR G1=21/28
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 27

STEREO ATTRIBUTES: NONE
L52 0 SEA FILE=REGISTRY SUB=L18 SSS FUL L49

no structures found

=>

=> FILE REG

FILE 'REGISTRY' ENTERED AT 14:22:15 ON 20 JUL 2004
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=> FILE HCAPLUS

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FILE COVERS 1907 - 20 Jul 2004 VOL 141 ISS 4
FILE LAST UPDATED: 19 Jul 2004 (20040719/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D QUE

L1 STR

L47 1 SEA FILE=HCAPLUS ABB=ON L46 AND WAVEGUIDE?
 L48 71 SEA FILE=HCAPLUS ABB=ON L40 OR L45 OR L47

71 CA references with utility

=> D L48 1-71 BIB ABS HITIND HITSTR

L48 ANSWER 1 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2004:489725 HCAPLUS

DN 141:61813

TI Electromagnetic wave-**polymerizable** liquid crystalline compositions free from **photopolymerization initiators**, and their copolymers, alignment layers, and manufacture of the alignment layers

IN Harufuji, Tatsushi

PA Chisso Corp., Japan; Chisso Petrochemical Corporation

SO Jpn. Kokai Tokkyo Koho, 29 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004168863	A2	20040617	JP 2002-335266	20021119
PRAI	JP 2002-335266		20021119		

AB The electromagnetic wave (EMW)-polymerizable liquid crystalline compns. contain ≥ 1 compds. represented by the general formula $R1A1Z1A2(Z2A3)mO(CH2)nZ3M$ and ≥ 1 compds. represented by the general formulas $R2A4Z4A5(Z5A6)oO(CH2)pOCH:CH2$ and $CH2:CHO(CH2)qOA7Z6A8Z7A9O(CH2)rOCH:CH2$ ($R1, R2 = H, F, Cl, CN, C1-20$ alkyl, etc. $A1-A9 = 1,4$ -cyclohexylene, etc.; $Z1-Z7 =$ single bond, $CO2, O2C, O$, etc., $m, o = 0, 1$; $n, p, q, r = 1-20$ integer; $M =$ maleimide, phenylmaleimide). The compns. show high photopolymn. reactivity, are difficult to polymerize upon heat, and have liquid crystalline phases in relatively low temperature regions. The compns.

are copolymd. by EMW irradiation to give alignment layers. Preferably, the compns. have been aligned before the EMW irradiation

IC ICM C08F216-12

ICS C08J005-18; C09K019-12; C09K019-14; C09K019-20; C09K019-30; C09K019-32; C09K019-34; C09K019-42; G02F001-13; C08F222-40; C08L029-10

CC 73-11 (**Optical**, Electron, and Mass Spectroscopy and Other Related Properties)

IT 131896-13-4 ~~148160-60-5~~ 148560-90-1

172258-53-6 195062-36-3 586354-93-0 642072-91-1
 642072-97-7 705286-93-7 705286-94-8

RL: TEM (Technical or engineered material use); USES (Uses)

(electromagnetic wave-polymerizable nematic liquid crystalline compns. free from photopolymn. initiators and their copolymers and alignment layers)

IT 148160-60-5 148560-90-1 172258-53-6

586354-93-0

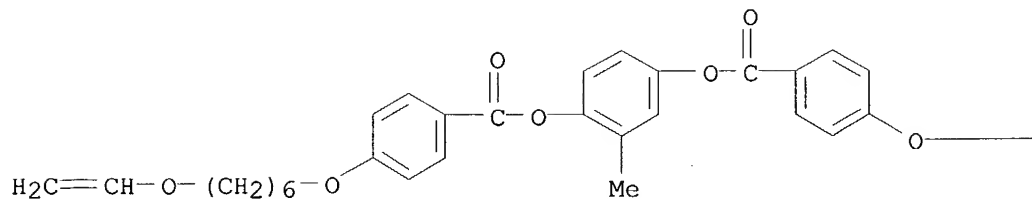
RL: TEM (Technical or engineered material use); USES (Uses)

(electromagnetic wave-polymerizable nematic liquid crystalline compns. free from photopolymn. initiators and their copolymers and alignment layers)

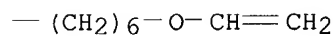
RN 148160-60-5 HCAPLUS

CN Benzoic acid, 4-[[6-(ethenyloxy)hexyl]oxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)

PAGE 1-A

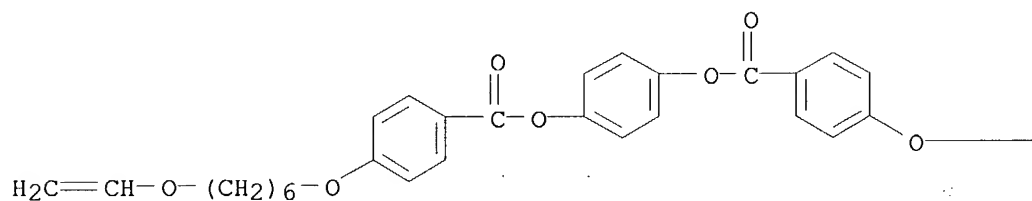


PAGE 1-B

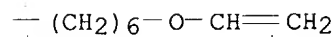


RN 148560-90-1 HCAPLUS
CN Benzoic acid, 4-[[6-(ethenyloxy)hexyl]oxy]-, 1,4-phenylene ester (9CI)
(CA INDEX NAME)

PAGE 1-A

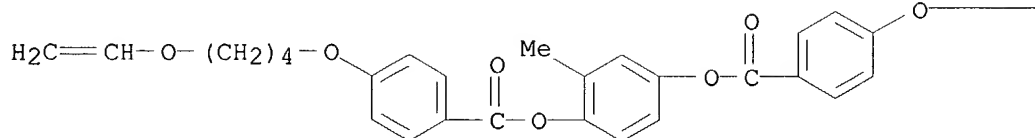


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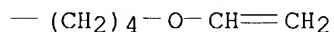


RN 172258-53-6 HCAPLUS
CN Benzoic acid, 4-[4-(ethenyloxy)butoxy]-, 2-methyl-1,4-phenylene ester
(9CI) (CA INDEX NAME)

PAGE 1-A



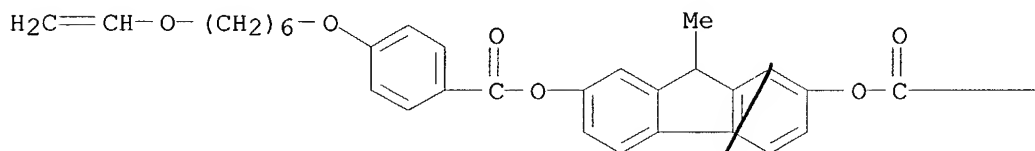
PAGE 1-B



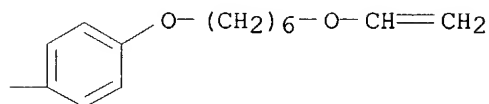
RN 586354-93-0 HCAPLUS

CN Benzoic acid, 4-[[6-(ethenyloxy)hexyl]oxy]-, 9-methyl-9H-fluorene-2,7-diyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L48 ANSWER 2 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2004:310401 HCAPLUS

DN 140:311787

TI Polarizer with photocurable pressure-sensitive adhesives layer and its bonding

IN Sawada, Takahiko; Nakata, Masakazu

PA Sekisui Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004118078	A2	20040415	JP 2002-284104	20020927
PRAI	JP 2002-284104		20020927		

AB The polarizer consists of (A) a polarizer, laminated at least on one side with (B) a protection film of a thermoplastic norbornene-based resin and (C) a pressure-sensitive adhesives layer comprising a pressure-sensitive adhesives composition containing thermoplastic polymers, photocation-

polymerizable compds., and **photocation-polymerization**

initiators, wherein a sheet of the pressure-sensitive adhesives composition shows dynamic storage modulus at $25^{\circ} \leq 5.0 + 107$ Pa and $\leq 1.0 + 109$ Pa, initially and after photocure, resp.

The photocurable pressure-sensitive adhesives layer of the polarizer is irradiated with actinic energy ray and is subsequently bonded to an adherend. Initially after the bonding, the polarizer is repeelable, hence workability in repeeling and rebonding has been improved.

IC ICM G02B005-30
ICS B29C065-52; C09J005-00; C09J011-06; C09J201-00; C09J201-02;
G02F001-1335; B29L009-00; B29L011-00

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other
Related Properties)
Section cross-reference(s): 38

IT **188107-39-3P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)
(crosslinked; polarizer with photocurable pressure-sensitive adhesives
layer containing)

IT 125054-47-9, Adeka Optomer SP 170
RL: CAT (Catalyst use); USES (Uses)
(**photocation polymerization initiator**; polarizer
with **photocurable** pressure-sensitive adhesives layer containing)

IT **188107-39-3P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)
(crosslinked; polarizer with photocurable pressure-sensitive adhesives
layer containing)

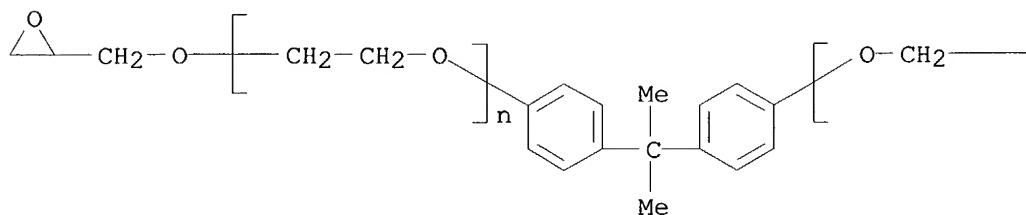
RN 188107-39-3 HCAPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane
and α, α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -
(oxiranylmethoxy)poly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

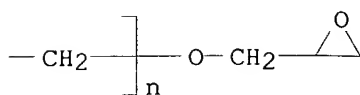
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CRN 54140-64-6
CMF (C2 H4 O)_n (C2 H4 O)_n C21 H24 O4
CCI PMS

PAGE 1-A

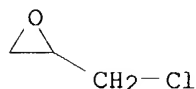


PAGE 1-B



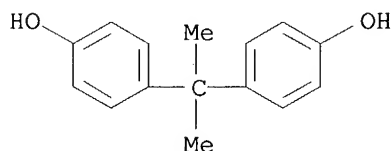
CM 2

CRN 106-89-8
CMF C3 H5 Cl O



CM 3

CRN 80-05-7
CMF C15 H16 O2



L48 ANSWER 3 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STM
AN 2004:271645 HCAPLUS
DN 140:294934
TI Cellulose acylate composite films, their manufacture, and their uses in optical films, liquid crystal displays, and photographic materials
IN Kato, Eiichi
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 48 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN: CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004099775	A2	20040402	JP 2002-264588	20020910
PRAI	JP 2002-264588		20020910		

AB The films are manufactured by casting cellulose acylate compns. containing radically-**polymerizable** monomers, cationically-**polymerizable** monomers, and **photopolymn. initiators** and irradiating the compns. with electron beam (sic). Also claimed are optical films and liquid crystal displays using the films and Ag halide photog. materials using the films with thickness 30-250 μ m as supports. The films show low haze, high tear strength, good weatherability, and neither contamination with foreign substances nor stains. A polarizer film prepared by laminating both sides of an iodine-adsorbed PVA-based polarizer with a pair of the composite cellulose triacetate films shows high durability.

IC ICM C08G085-00
ICS B29C041-24; C08J005-18; C08L001-10; C08L101-00; G03C001-795; B29K001-00; B29L007-00

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

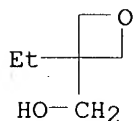
Section cross-reference(s): 38, 43, 73

- IT 9011-14-7P, Methyl methacrylate homopolymer 25085-98-7P 26283-70-5P,
Hydrogenated bisphenol A diglycidyl ether homopolymer 99732-63-5P
658059-80-4P 658059-82-6P 658059-84-8P **658059-86-0P**
658060-14-1P 658060-20-9P 658060-24-3P 658060-26-5P 658063-14-0P
676265-21-7P 676265-23-9P 676265-25-1P 676265-27-3P 676265-28-4P
676265-29-5P 676265-31-9P 676265-33-1P 676265-34-2P 676265-38-6P
676265-41-1P 676265-43-3P 676265-45-5P 676265-48-8P 676265-49-9P
676265-51-3P 676266-16-3P 676266-18-5P
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical
process); POF (Polymer in formulation); PYP (Physical process); TEM
(Technical or engineered material use); PREP (Preparation); PROC
(Process); USES (Uses)
(manufacture of cellulose acylate films for LCD, photog. materials, etc.,
from dopes containing radically-polymerizable monomers,
cationically-polymerizable monomers, and photoinitiators)
- IT **658059-86-0P**
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical
process); POF (Polymer in formulation); PYP (Physical process); TEM
(Technical or engineered material use); PREP (Preparation); PROC
(Process); USES (Uses)
(manufacture of cellulose acylate films for LCD, photog. materials, etc.,
from dopes containing radically-polymerizable monomers,
cationically-polymerizable monomers, and photoinitiators)
- RN 658059-86-0 HCAPLUS
CN 3-Oxetanemethanol, 3-ethyl-, polymer with 2,2'-[(1-
methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane] (9CI) (CA
INDEX NAME)

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CRN 3047-32-3

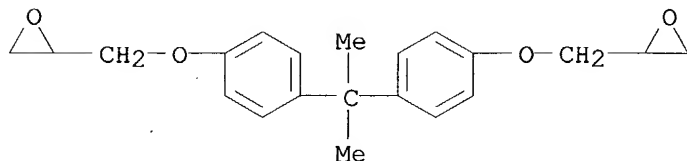
CMF C6 H12 O2



CM 2

CRN 1675-54-3

CMF C21 H24 O4



L48 ANSWER 4 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

AN 2004:200900 HCAPLUS
 DN 140:261162
 TI Manufacture of acrylic photochromic optical materials and plastic lenses using them with high refractive index, fast response, and good impact resistance
 IN Kuwata, Mutsuo; Takaoka, Toshiaki
 PA NOF Corporation, Japan
 SO Jpn. Kokai Tokkyo Koho, 14 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004078052	A2	20040311	JP 2002-241359	20020822
PRAI	JP 2002-241359		20020822		

AB The manufacturing method contains curing a composition comprising (A) monomer mixts.,
 which contain 5-60% di(meth)acrylates $\text{CH}_2\text{:CR1CO}_2(\text{CH}_2\text{CH}_2\text{O})_j(\text{CO}_2)_k(\text{QCM}_2\text{Q})_p(\text{OCO})_m(\text{OCH}_2\text{CH}_2)_n\text{OCOCR1:CH}_2$ ($\text{R1} = \text{H, Me; Q} = \text{phenylene; j, n} = 4-20; k, p, m = 0, 1$), (B) 0.001-10% photochromic materials, and (C) 0.01-10% radical polymerization initiators selected from peroxyesters, peroxyketals, and azo compds. The monomer mixts. may further contain polyols or polythiols and polyisocyanates.

IC ICM G02B001-04
 ICS C08F002-44; C08F220-26; C08F290-06; C08G018-30; G02B005-23; G02C007-10

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
 Section cross-reference(s): 38, 74

IT 136324-82-8P 138551-37-8P 138551-39-0P,
 2,2-Bis(4-methacryloxyethoxyphenyl)propane-2,2-bis(4-methacryloxy-pentaethoxyphenyl)propane-methyl methacrylate copolymer
 669775-48-8P 669775-50-2P, 2,2-Bis(4-methacryloxyethoxyphenyl)propane-2,2-bis[(4-methacryloxy-pentaethoxycarbonyloxy)phenyl]propane-nonaethylene glycol dimethacrylate copolymer
 669775-52-4P, 2,2-Bis(4-acryloxy-pentaethoxyphenyl)propane-2,2-bis(4-methacryloxy-pentadecaethoxyphenyl)propane-CR 39-nonaethylene glycol dimethacrylate copolymer 669775-54-6P 669775-55-7P
 669775-58-0P, 2,2-Bis[(4-methacryloxy-pentaethoxycarbonyloxy)phenyl]propane-nonaethylene glycol dimethacrylate-2,2'-thiodiethanethiol-m-xylylene diisocyanate copolymer 669775-59-1P 669775-60-4P 669775-61-5P
 669775-62-6P 669775-62-6P 669775-63-7P 669775-64-8P,
 2,2-Bis(4-methacryloxy-pentadecaethoxyphenyl)propane-2,2-bis[(4-methacryloxy-pentaethoxycarbonyloxy)phenyl]propane-3-isopropenyl- α,α -dimethylbenzyl isocyanate-pentaerythritol tetrakis(β -thiopropionate)-2,2'-thiodiethanethiol copolymer
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (acrylic polymer photochromic lenses high refractive index, fast response, and good impact resistance)

IT 6674-22-2, 1,8-Diazabicyclo[5,4,0]undecene-7 6731-36-8, Perhexa 3M
 26748-41-4, Perbutyl ND
 RL: CAT (Catalyst use); USES (Uses)
 (radical polymerization initiator; acrylic polymer photochromic lenses high refractive index, fast response, and good impact resistance)

IT 136324-82-8P 138551-37-8P 138551-39-0P,
 2,2-Bis(4-methacryloxyethoxyphenyl)propane-2,2-bis(4-

methacryloxy-pentaethoxyphenyl)propane-methyl methacrylate copolymer
669775-48-8P 669775-50-2P, 2,2-Bis(4-methacryloxyethoxyphenyl)propane-2,2-bis[(4-methacryloxy-pentaethoxycarbonyloxy)phenyl]propane-nonaethylene glycol dimethacrylate copolymer
669775-52-4P, 2,2-Bis(4-acryloxy-pentaethoxyphenyl)propane-2,2-bis(4-methacryloxy-pentadecaethoxyphenyl)propane-CR 39-nonaethylene glycol dimethacrylate copolymer **669775-54-6P 669775-55-7P**

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylic polymer photochromic lenses high refractive index, fast response, and good impact resistance)

RN 136324-82-8 HCAPLUS

CN 2,5,8,10-Tetraoxatridec-12-enoic acid, 9-oxo-, 2-propenyl ester, polymer with α, α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

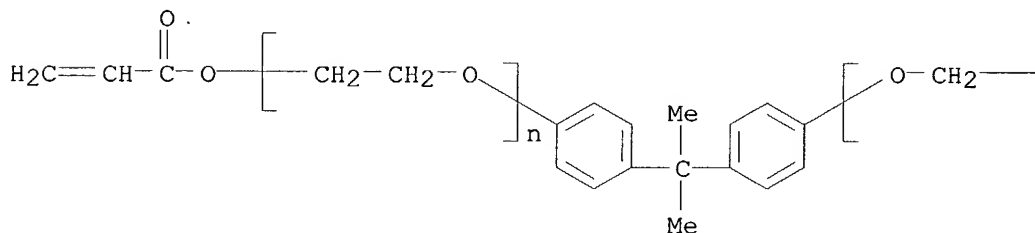
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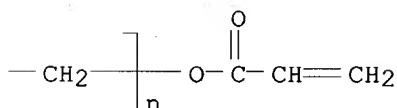
CMF (C2 H4 O)n (C2 H4 O)n C21 H20 O4

CCI PMS

PAGE 1-A



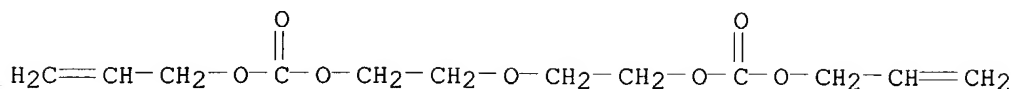
PAGE 1-B



CM 2

CRN 142-22-3

CMF C12 H18 O7



RN 138551-37-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) ester, polymer with α, α' -[(1-methylethylidene)di-

4,1-phenylene]bis[ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

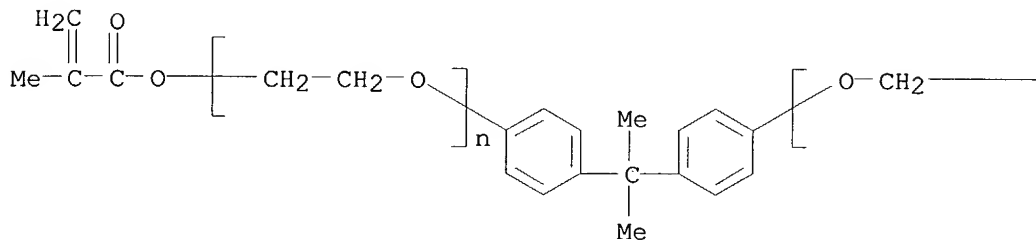
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CRN 41637-38-1

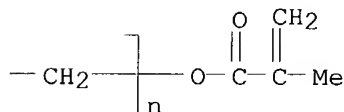
CMF (C2 H4 O)n (C2 H4 O)n C23 H24 O4

CCI PMS

PAGE 1-A



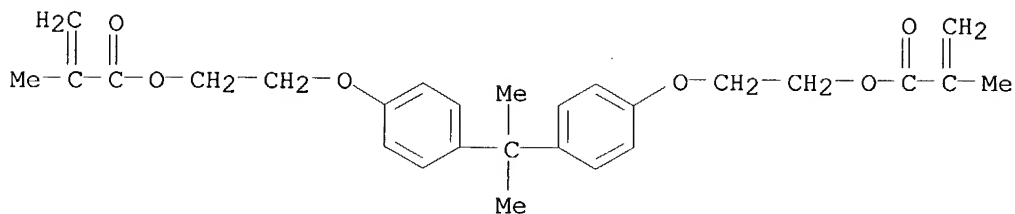
PAGE 1-B



CM 2

CRN 24448-20-2

CMF C27 H32 O6



RN 138551-39-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) ester, polymer with α,α'-[(1-methylethylidene)di-4,1-phenylene]bis[ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

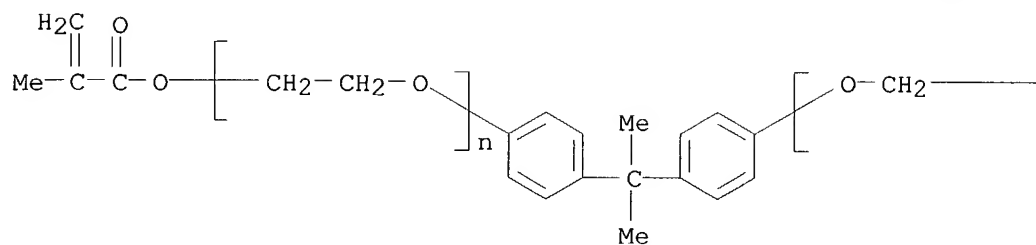
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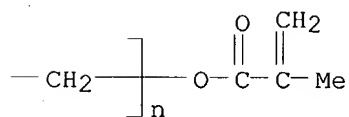
CMF (C2 H4 O)n (C2 H4 O)n C23 H24 O4

CCI PMS

PAGE 1-A

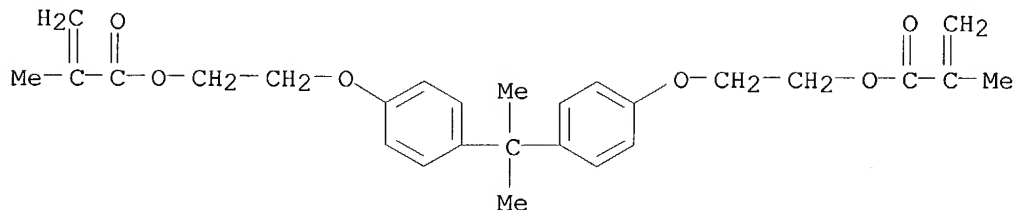


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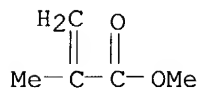
CM 2

CRN 24448-20-2
CMF C27 H32 O6



CM 3

CRN 80-62-6
CMF C5 H8 O2



RN 669775-48-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with
 α, α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] and
 α -(1-oxo-2-propenyl)- ω -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

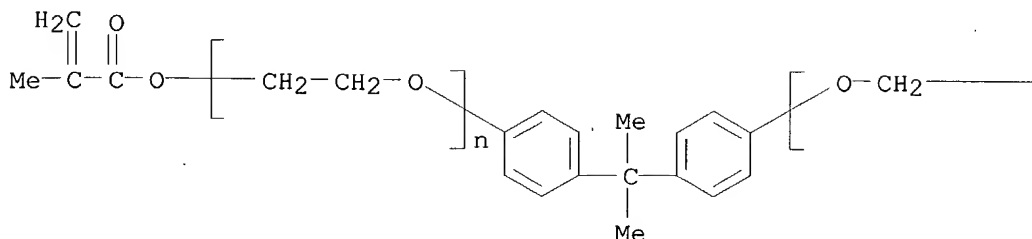
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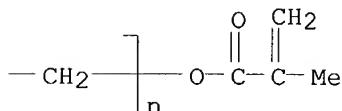
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CCI PMS

PAGE 1-A



PAGE 1-B

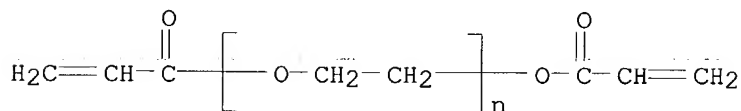


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CRN 26570-48-9

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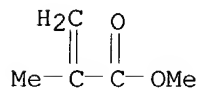
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CM 3

CRN 80-62-6

CMF C5 H8 O2



RN 669775-50-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) ester, polymer with α, α' -[(1-methylethylidene)bis(4,1-phenyleneoxycarbonyl)]bis[ω -[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] and α -(2-methyl-1-oxo-2-

propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)
(9CI) (CA INDEX NAME)

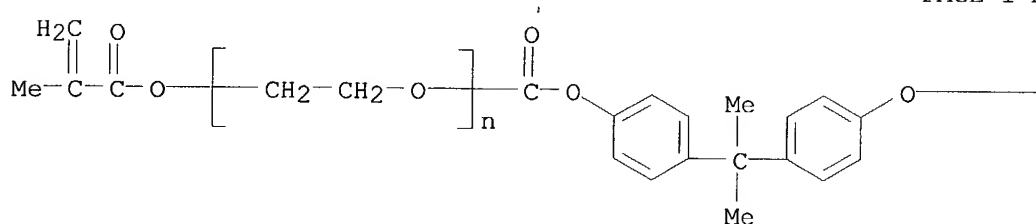
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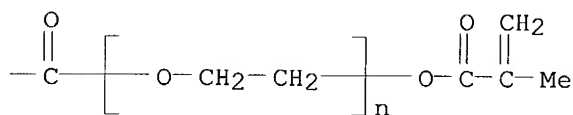
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CCI PMS

PAGE 1-A



PAGE 1-B

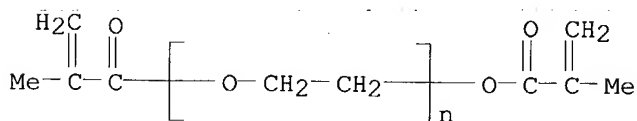


CM 2

CRN 25852-47-5

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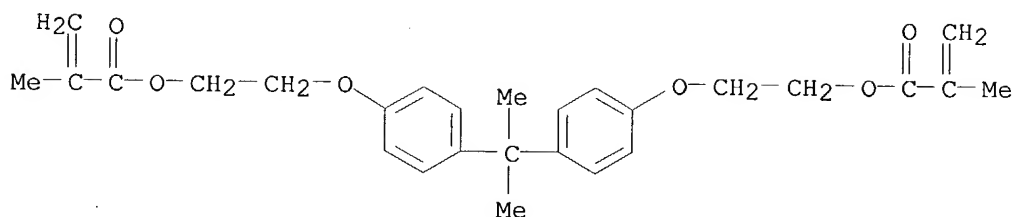
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CM 3

CRN 24448-20-2

CMF C27 H32 O6

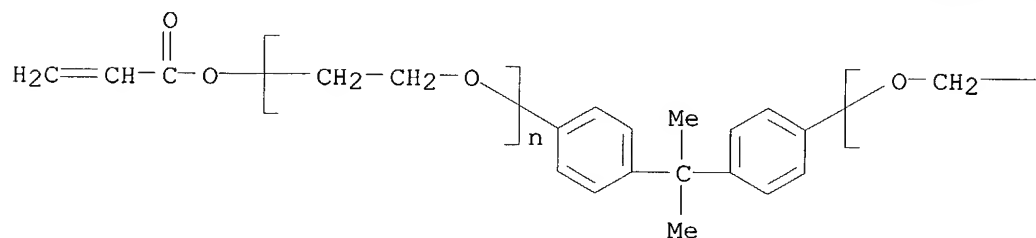


RN 669775-52-4 HCAPLUS
 CN Poly(oxy-1,2-ethanediyl), α,α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -(2-methyl-1-oxo-2-propenyl)oxy]-, polymer with α,α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) and α -(2-methyl-1-oxo-2-propenyl)- ω -(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

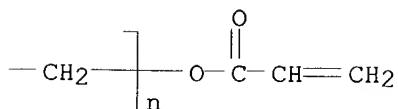
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CRN 64401-02-1
 CMF (C2 H4 O)_n (C2 H4 O)_n C21 H20 O4
 CCI PMS

PAGE 1-A



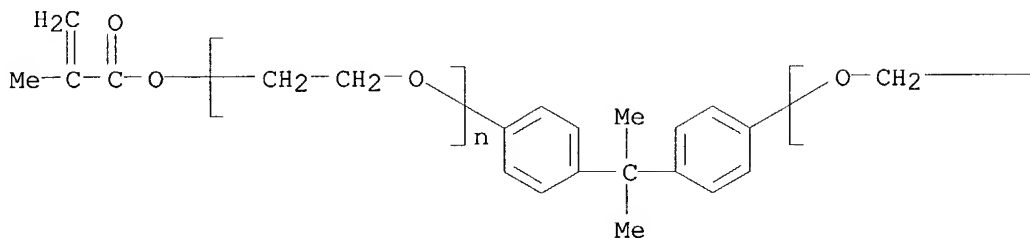
PAGE 1-B



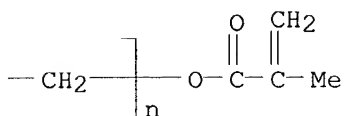
CM 2

CRN 41637-38-1
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 CCI PMS

PAGE 1-A



PAGE 1-B

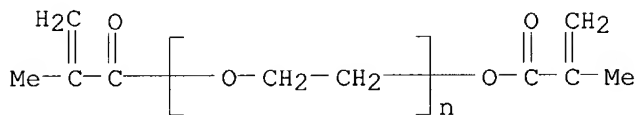


CM 3

CRN 25852-47-5

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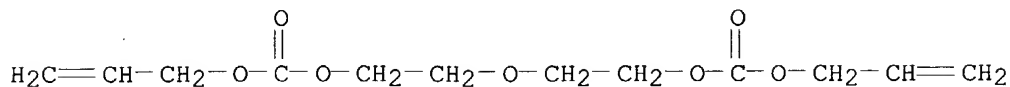
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CM 4

CRN 142-22-3

CMF C12 H18 O7



RN 669775-54-6 HCAPLUS

CN 2,5,8,10-Tetraoxatridec-12-enoic acid, 9-oxo-, 2-propenyl ester, polymer with α,α'-[(1-methylethylidene)bis(4,1-phenyleneoxycarbonyl)]bis[ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

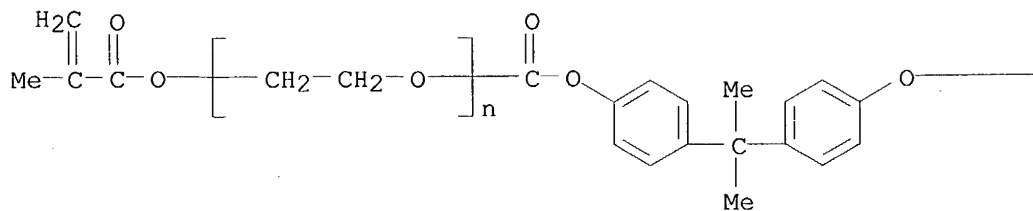
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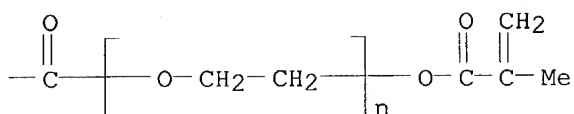
CMF (C2 H4 O)_n (C2 H4 O)_n C25 H24 O8

CCI PMS

PAGE 1-A

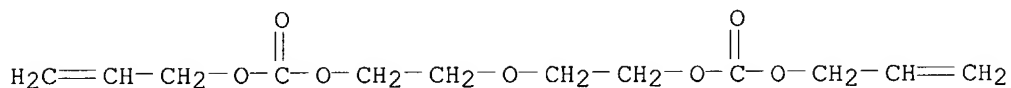


PAGE 1-B



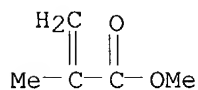
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CMF C12 H18 O7



CM 3

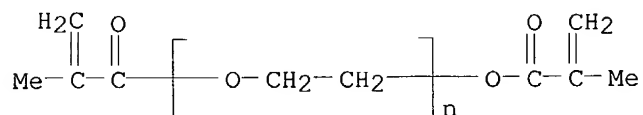
CRN 80-62-6
CMF C5 H8 O2



RN 669775-55-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) ester, polymer with methyl 2-methyl-2-propenoate and α -(2-methyl-1-oxo-2-propenyl)- ω -[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

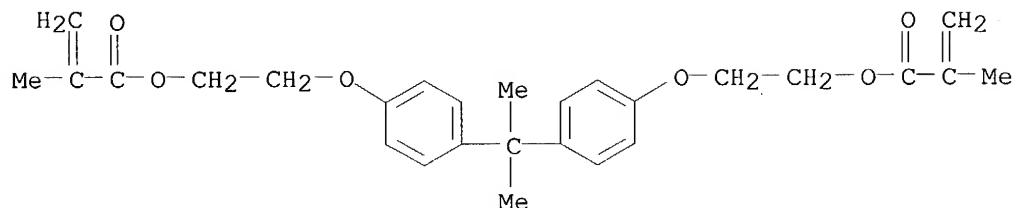
CRN 25852-47-5
CMF (C2 H4 O)_n C8 H10 O3
CCI PMS



CM 2

CRN 24448-20-2

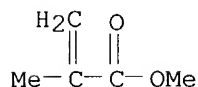
CMF C27 H32 O6



CM 3

CRN 80-62-6

CMF C5 H8 O2



L48 ANSWER 5 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2004:117562 HCAPLUS

DN 140:189907

TI Cellulose acylate films, their manufacture, optical films, liquid-crystal displays, and silver halide photographic materials

IN Kato, Eiichi

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 61 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004042381	A2	20040212	JP 2002-201749	20020710
PRAI	JP 2002-201749		20020710		
OS	MARPAT 140:189907				

AB The films are manufactured by (1) applying cellulose acylate compns. containing **polymerizable monomers, photopolymn. initiators**, and spectral sensitizers Ar1R3C:CR2C(:X)R1 [R1-R3 = H, monovalent nonmetal atomic group; R1-R3 may form acidic nucleus of dyes; Ar1 = aryl group having OR4, NR5, and/or SR6 at o- or p-position; X = O, S, :NR7; R4-R7 = (un)substituted alkyl or aryl] and (2) irradiating with UV light.

The photog. materials have supports of the films with thickness 30-250 μm . The films show high bending and tear strength and good storage stability.

IC ICM B29C041-24
ICS B29C041-50; C08F002-44; C08F002-50; C08F251-02; C08J005-18;
G02B005-30; G02F001-1335; B29K001-00; B29L007-00; C08L001-10

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38, 73

IT 9011-14-7P, Methyl methacrylate homopolymer 99732-63-5P 658059-80-4P
658059-82-6P 658059-84-8P 658059-85-9P **658059-86-0P**
658059-89-3P 658059-91-7P 658059-94-0P 658059-97-3P 658060-00-5P
658060-03-8P 658060-06-1P 658060-09-4P 658060-11-8P 658060-13-0P
658060-14-1P 658060-16-3P 658060-18-5P 658060-20-9P 658060-21-0P
658060-23-2P 658060-24-3P 658060-26-5P 658060-30-1P 658060-33-4P
658060-36-7P 658060-40-3P 658060-43-6P 658063-12-8P 658063-14-0P
RL: DEV (Device component use); IMF (Industrial manufacture); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(manufacture of cellulose acylate films with high tear strength for LCD and photog. materials)

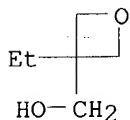
IT **658059-86-0P**
RL: DEV (Device component use); IMF (Industrial manufacture); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(manufacture of cellulose acylate films with high tear strength for LCD and photog. materials)

RN 658059-86-0 HCAPLUS

CN 3-Oxetanemethanol, 3-ethyl-, polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

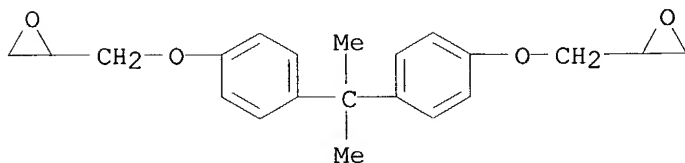
CM 1

CRN 3047-32-3
CMF C6 H12 O2



CM 2

CRN 1675-54-3
CMF C21 H24 O4

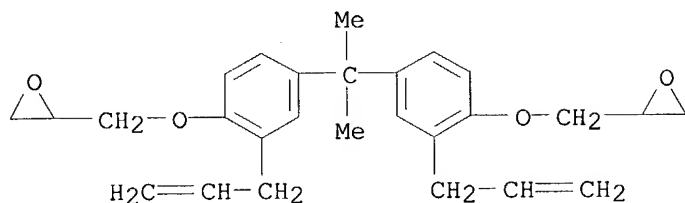


L48 ANSWER 6 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:32646 HCAPLUS
DN 140:95164
TI UV-curable epoxy resin adhesives for optical devices
IN Usui, Hideyuki; Fukushima, Takashi
PA Nitto Denko Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004010675	A2	20040115	JP 2002-163312	20020604
PRAI	JP 2002-163312		20020604		
AB	The adhesives contain 2,2'-diallylbisphenol A diglycidyl ether (I), QCO[O(CH ₂) ₅ CO]bOCH ₂ Q (II; Q = 3,4-epoxycyclohexyl; b = 0-5), and photopolymn. initiators . Thus, an adhesive comprising I 70, II (b = 0) 30, SP 170 (initiator) 4, antioxidant 1, antifoaming agent 0.02, and coupling agent 1 part showed light transmittance 89%, water absorption 0.63%, and adhesive strength between quartz glass before and after moisture treatment 16 and 10.5 MPa, resp.				
IC	ICM C09J163-00				
	ICS C09J163-02				
CC	38-3 (Plastics Fabrication and Uses) Section cross-reference(s): 73				
IT	643758-34-3P 643758-35-4P RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (UV-curable epoxy resin adhesives for optical devices)				
IT	139660-13-2				
	RL: TEM (Technical or engineered material use); USES (Uses) (assumed monomers, oligomeric ; UV-curable epoxy resin adhesives for optical devices)				
IT	139198-19-9				
	RL: TEM (Technical or engineered material use); USES (Uses) (oligomeric ; UV-curable epoxy resin adhesives for optical devices)				
IT	643758-34-3P 643758-35-4P RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (UV-curable epoxy resin adhesives for optical devices)				
RN	643758-34-3	HCAPLUS			
CN	7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester, polymer with 2,2'-[(1-methylethylidene)bis[[2-(2-propenyl)-4,1-phenylene]oxymethylene]]bis[oxirane] (9CI) (CA INDEX NAME)				

CM 1

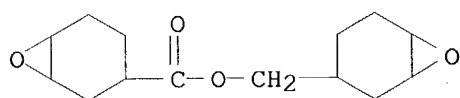
CRN 13410-54-3
CMF C27 H32 O4



CM 2

CRN 2386-87-0

CMF C14 H20 O4



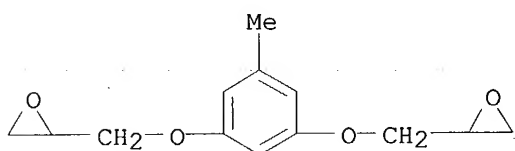
RN 643758-35-4 HCAPLUS

CN 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester, polymer with 2,2'-[(1-methylethylidene)bis[[2-(2-propenyl)-4,1-phenylene]oxymethylene]]bis[oxirane] and 2,2'-[(5-methyl-1,3-phenylene)bis(oxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

CM 1

CRN 64593-59-5

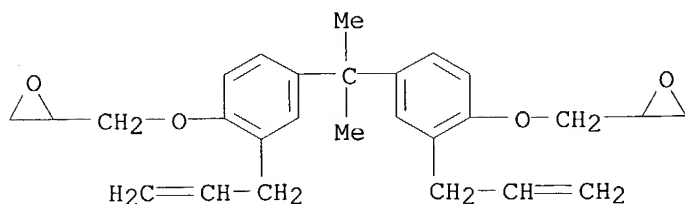
CMF C13 H16 O4



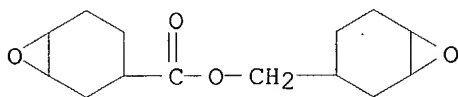
CM 2

CRN 13410-54-3

CMF C27 H32 O4



CM 3

CRN 2386-87-0
CMF C14 H20 O4

L48 ANSWER 7 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:870481 HCAPLUS

DN 139:356044

TI Radiation-sensitive mixture and recording material using this mixture

IN Gries, Willi Kurt

PA AGFA-Gevaert, Belg.

SO Eur. Pat. Appl., 18 pp.

CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1359008	A1	20031105	EP 2002-100424	20020429
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	US 2003215744	A1	20031120	US 2003-425158	20030429
	JP 2003344997	A2	20031203	JP 2003-125528	20030430
PRAI	EP 2002-100424	A	20020429		
	US 2002-390988P	P	20020624		

OS MARPAT 139:356044

AB The invention relates to a radiation-sensitive mixture comprising a radical polymerizable acrylate- or methacrylate-monomer and/or **oligomer** with at least two acrylate- and/or methacrylate-groups and at least one photooxidizable group, one photoinitiator, one IR-absorbing dye and one organic polymer binder, wherein the IR-absorbing dye is heptamethyl cyanine dye. The invention further relates to a recording material with a support and a photopolymerizable layer as well as a method for manufacturing a printing plate using the recording material. The recording material shows excellent light sensitivity.

IC ICM B41C001-10

ICS B41M005-36; B41M005-40; C09B055-00

CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 3253-39-2, Bisphenol A dimethacrylate 15625-89-5,

Trimethylolpropanetriacrylate 60506-81-2, SR 399 75577-70-7, SR 454

RL: TEM (Technical or engineered material use); USES (Uses)

(in photopolymerizable recording mixture suitable for manufacturing offset lithog. printing plate)

IT 69432-53-7

RL: TEM (Technical or engineered material use); USES (Uses)

(photoinitiator in photopolymerizable recording

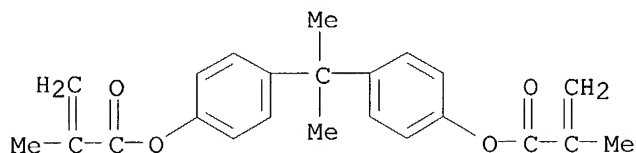
mixture suitable for manufacturing offset lithog. printing plate)

IT 3253-39-2, Bisphenol A dimethacrylate

RL: TEM (Technical or engineered material use); USES (Uses)
(in photopolymerizable recording mixture suitable for manufacturing offset lithog. printing plate)

RN 3253-39-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, (1-methylethylidene)di-4,1-phenylene ester
(9CI) (CA INDEX NAME)



RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 8 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:793608 HCAPLUS

DN 139:277852

TI Two-step curable polymer compositions, manufacture of moldings with fine surface structure from them, and precision machines using them

IN Kitamura, Kyoji

PA Omron Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003286301	A2	20031010	JP 2002-326978	20021111
PRAI	JP 2002-12776	A	20020122		

AB The compns., useful for Fresnel lenses, prism sheets, and reflective sheets, etc., contain aliphatic, aromatic, and/or heterocyclic compds. (A) bearing ≥ 2 radically polymerizable groups which show photopolymerizable and thermally polymerizable properties, photopolymn. initiators (B), and thermal polymn. initiators (C) with thermal decomposition temperature $\geq 100^\circ$. Thus, a composition containing bisphenol A-ethylene oxide adduct dimethacrylate 7.0, trimethylolpropane trimethacrylate 3.0, Irgacure 907 (initiator) 0.30, Irgacure 184 (initiator) 0.20, and cumene hydroperoxide 0.20 g was applied to a glass substrate, UV-irradiated, pressed in a mold, and heated at 200° for 1 h to give a test piece with good appearance and mold releasability.

IC ICM C08F002-00

ICS B29C039-10; C08J005-00; G02B001-04; B29K033-00; B29L009-00; C08L033-00

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 37, 73

IT 3290-92-4DP, Trimethylolpropane trimethacrylate, reaction products with novolak epoxy resin methacrylates **141313-14-6P** 606080-22-2P 606080-23-3P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(two-step curable polymer compns. for manufacturing moldings with fine surface structure for precision machines)

IT **141313-14-6P**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(two-step curable polymer compns. for manufacturing moldings with fine surface structure for precision machines)

RN 141313-14-6 HCAPLUS

CN 2-Propenoic acid, 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with α, α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

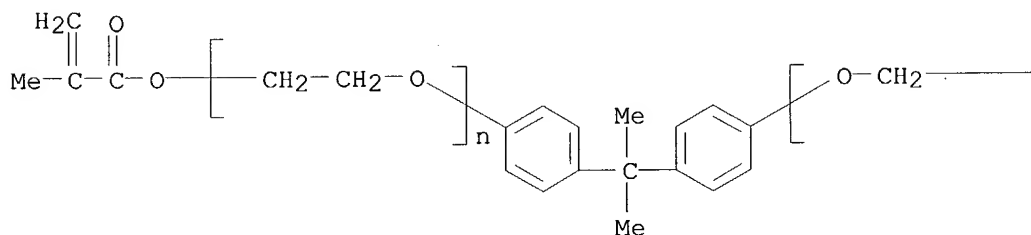
CM 1

CRN 41637-38-1

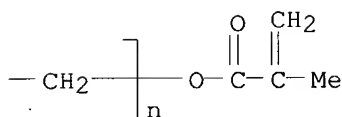
CMF (C2 H4 O)_n (C2 H4 O)_n C23 H24 O4

CCI PMS

PAGE 1-A



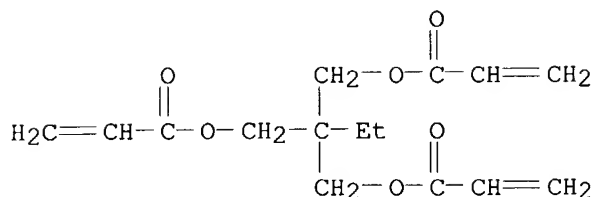
PAGE 1-B



CM 2

CRN 15625-89-5

CMF C15 H20 O6



L48 ANSWER 9 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:774091 HCAPLUS

DN 139:300123

TI Through-hole plugging materials and permanently plugging of through-holes

in printed circuit boards
 IN Motori, Susumu
 PA Mitsubishi Gas Chemical Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003283125	A2	20031003	JP 2002-83066	20020325
PRAI	JP 2002-83066		20020325		

AB The title plugging materials comprise (1) 80-98 weight-parts 1st component containing cyanate esters and/or prepolymers and liquid epoxy materials and (2) 2-20 weight-parts 2nd component containing radical monomers and/or oligomers. Materials addnl. contain photoradical polymerization initiator 0.05-3, thermosetting catalyst 0.01-3, and filler 50-400 weight-parts. The plugging process involves filling the material into through holes, UV irradiating the plugged material to increase viscosity in holes, and heating to cure. The composition and the process give through holes plugged without internal voids, cracks, dents, and delamination.

IC ICM H05K003-40
 CC 76-2 (Electric Phenomena)
 Section cross-reference(s): 38

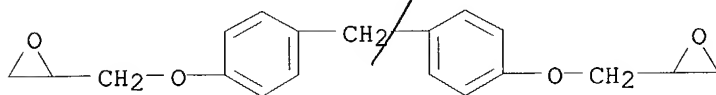
IT 65581-98-8, EXA830CRP
 RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
 (bisphenol F epoxy; through-hole plugging materials and permanently plugging of through-holes in printed circuit boards)

IT 65581-98-8, EXA830CRP
 RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
 (bisphenol F epoxy; through-hole plugging materials and permanently plugging of through-holes in printed circuit boards)

RN 65581-98-8 HCAPLUS
 CN Oxirane, 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 2095-03-6
 CMF C19 H20 O4



L48 ANSWER 10 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2003:606967 HCAPLUS
 DN 140:271339
 TI Study on photoinitiated cationic polymerization of different functionality epoxy resins
 AU Yang, Guang; Xing, Tao; Chu, Zeng-ze; Huang, Peng-cheng
 CS School of Materials Science and Engineering, Beijing University of

Aeronautics and Astronautics, Beijing, 100083, Peop. Rep. China

SO Reguxing Shuzhi (2003), 18(3), 4-6

CODEN: RESHEQ; ISSN: 1002-7432

PB Reguxing Shuzhi Bianjibu

DT Journal

LA Chinese

AB The photoinitiated cationic polymns. of epoxy resins with different functionality (E-51, 711, TDE-85 and AG-80) were investigated in the presence of one diphenyliodonium or two kinds of di-alkylphenacylsulfonium salt photoinitiators. The results showed that the photoinitiated cationic ring-opening polymerization of the epoxy resin AG-80 was not be observed. Other epoxy resins could undergo photopolymerization at different rates, and the photoinitiated cationic polymerization of bisphenol-A type epoxide oligomers E-51 with diphenyliodonium salt was much more effective than other initiators. Because the chain termination was difficult in cationic polymerization, the photoinitiated epoxy resin systems using iodonium salt would continue to cure even after the UV light had been turned off.

CC 35-7 (Chemistry of Synthetic High Polymers)

IT **Polymerization** kinetics

(cationic, photochem.; photoinitiated cationic polymerization rate of different functionality epoxy resins)

IT **Polymerization**

(ring-opening, cationic photochem.; photoinitiated cationic polymerization rate of different functionality epoxy resins)

IT 5493-45-8 **25085-99-8**, E-51 31305-94-9, AG-80 36595-37-6, TDE-85

RL: RCT (Reactant); RACT (Reactant or reagent)

(photoinitiated cationic polymerization rate of different functionality epoxy resins)

IT **25085-99-8**, E-51

RL: RCT (Reactant); RACT (Reactant or reagent)

(photoinitiated cationic polymerization rate of different functionality epoxy resins)

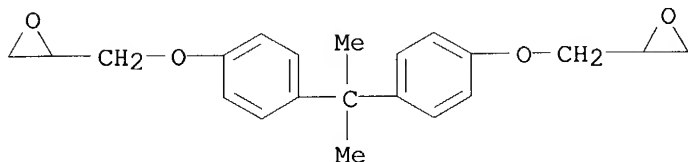
RN 25085-99-8 HCAPLUS

CN Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 1675-54-3

CMF C21 H24 O4



L48 ANSWER 11 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:582498 HCAPLUS

DN 139:157120

TI Photopolymerizable resin composition, resin composition for optical

waveguide, and cured product of the composition
 IN Koyanagi, Takao; Yokoshima, Minoru
 PA Nippon Kayaku Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003212961	A2	20030730	JP 2002-17921	20020128
PRAI	JP 2002-17921		20020128		
AB	The composition contains a photosensitive cationic polymerization initiator and a hydrogenated terphenyldiphenol diglycidyl ether optionally associated with the polymerizable component, preferably, an oxetane compound. The composition and its cured product are used as an optical waveguide capable of forming multilayer optical circuits in optical communication, optical data processing, etc.				
IC	ICM C08G059-24				
	ICS G02B006-12				
CC	73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties) Section cross-reference(s): 38				
ST	hydrogenated terphenyldiphenol diglycidyl ether cationic photopolymer; optical waveguide multilayer circuit resin compn				
IT	Epoxy resins, uses RL: TEM (Technical or engineered material use); USES (Uses) (hydrogenated terpene-phenolic resin-based; photopolymerizable epoxy resin composition for optical waveguide)				
IT	Optical waveguides (photopolymerizable epoxy resin composition for optical waveguide)				
IT	Polymerization catalysts (photopolymer; in photopolymerizable epoxy resin composition for optical waveguide)				
IT	Terpenes, uses RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses) (polymers with phenol, hydrogenated, glycidyl ether; for photopolymerizable epoxy resin composition for optical waveguide)				
IT	Phenols, uses RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses) (polymers with terpenes, hydrogenated, glycidyl ether; for photopolymerizable epoxy resin composition for optical waveguide)				
IT	Terpenes, uses RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses) (polymers, with phenols, hydrogenated glycidyl ether; photopolymerizable epoxy resin composition for optical waveguide)				
IT	26146-94-1D , polymers with terpenes RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses) (for photopolymerizable epoxy resin composition for optical waveguide)				
IT	2386-87-0D, polymers with terpenes RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses) (photopolymerizable epoxy resin composition for optical waveguide)				
IT	74227-35-3, Bis[4-(Diphenylsulfonium)phenyl] sulfide				

bishexafluorophosphate

RL: CAT (Catalyst use); USES (Uses)

(polymerization initiator; in photopolymerizable epoxy resin composition for optical waveguide)

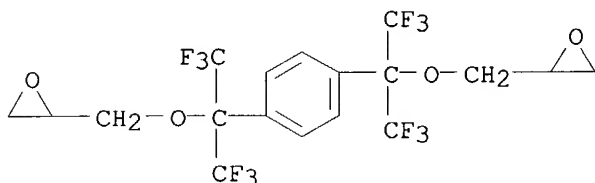
IT 26146-94-1D, polymers with terpenes

RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)

(for photopolymerizable epoxy resin composition for optical waveguide)

RN 26146-94-1 HCAPLUS

CN Oxirane, 2,2'-[1,4-phenylenebis[[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]oxymethylene]]bis- (9CI) (CA INDEX NAME)



L48 ANSWER 12 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:488773 HCAPLUS

DN 139:76109

TI Resin compositions with good curability, optical waveguides using them, their manufacture, and their optical devices

IN Watanabe, Takeo; Sato, Takashi; Ishida, Kiyotaka; Kadota, Ryuji

PA Showa Denko K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003177260	A2	20030627	JP 2001-380165	20011213
PRAI	JP 2001-380165		20011213		
OS	MARPAT 139:76109				

AB The comps. comprise alicyclic compds. having ≥ 1 oxetanyl groups in a mol. The alicyclic compds. include 2-oxaspiro[3.5]nona-6-ene, 2-oxaspiro[3.5]nonane, 6,7-epoxy-2-oxaspiro[3.5]nonane, etc.

IC ICM G02B006-12

ICS C08G065-18; C08G065-26

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 38

ST optical waveguide alicyclic oxetane compn curability; oxaspiroonene epoxy cationic polymn curable waveguide

IT Phosphonium compounds

Sulfonium compounds

RL: CAT (Catalyst use); USES (Uses)

(cationic polymerization initiators; epoxy-oxetane compns. with good curability for optical waveguides)

IT Polymerization catalysts

(cationic; epoxy-oxetane compns. with good curability for optical waveguides)

- IT Polyethers, uses
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(epoxy-, fluorine-containing; epoxy-oxetane compns. with good curability for optical **waveguides**)
- IT Optical instruments
Optical **waveguides**
(epoxy-oxetane compns. with good curability for optical **waveguides**)
- IT Fluoropolymers, uses
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(epoxy-polyether-; epoxy-oxetane compns. with good curability for optical **waveguides**)
- IT Polyethers, uses
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(epoxy; epoxy-oxetane compns. with good curability for optical **waveguides**)
- IT Onium compounds
RL: CAT (Catalyst use); USES (Uses)
(iodonium, cationic polymerization initiators; epoxy-oxetane compns. with good curability for optical **waveguides**)
- IT Epoxy resins, uses
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(polyether-, fluorine-containing; epoxy-oxetane compns. with good curability for optical **waveguides**)
- IT Epoxy resins, uses
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(polyether-; epoxy-oxetane compns. with good curability for optical **waveguides**)
- IT Diazonium compounds
RL: CAT (Catalyst use); USES (Uses)
(salts, cationic polymerization initiators; epoxy-oxetane compns. with good curability for optical **waveguides**)
- IT 371775-07-4P 459796-77-1P 550364-85-7P 550364-86-8P 550364-87-9P
550364-88-0P 550364-89-1P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(epoxy-oxetane compns. with good curability for optical **waveguides**)
- IT 58162-44-0P 442868-74-8P
RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)
(epoxy-oxetane compns. with good curability for optical **waveguides**)
- IT 173-23-9P, Spiro[bicyclo[2.2.1]heptane-2,3'-oxetane] 7328-07-6DP, cyclocarbonic ester 7328-07-6P, 6-Methyl-3-cyclohexene-1,1-dimethanol 14338-17-1P, 7,8-Epoxy-5-methyl-2-oxaspiro[3.5]nonane 122085-44-3P, Oxirane, 2,2'-[1,3-cyclohexanedibis[[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]oxymethylene]]bis- 122085-45-4P, Oxirane, 2,2'-[1,4-cyclohexanedibis[[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]oxymethylene]]bis- 354575-38-5P, 5-Methyl-2-oxaspiro[3.5]nonane 372508-92-4P, 9-Methyl-2-oxaspiro[3.5]nona-6-ene 459796-71-5P, 7,8-Epoxy-5-ethyl-2-oxaspiro[3.5]nonane 459796-73-7P, 7,8-Epoxy-5-trifluoromethyl-2-

oxaspiro[3.5]nonane 459796-75-9P, 2-Oxa-5-phenylspiro[3.5]nonane
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
 (Reactant or reagent)

(epoxy-oxetane compns. with good curability for optical
waveguides)

IT 89-94-1, 2-Methyl-4-cyclohexene-1-carboxaldehyde 15449-66-8,
 Bicyclo[2.2.1]heptane-2,2-dimethanol 23714-37-6, 2-Phenylcyclohexane-1,1-
 dimethanol 518979-61-8, 6-Ethyl-3-cyclohexene-1-carboxaldehyde
 550364-84-6

RL: RCT (Reactant); RACT (Reactant or reagent)
 (epoxy-oxetane compns. with good curability for optical
waveguides)

IT 183147-20-8, Sanaid SI 60L

RL: CAT (Catalyst use); USES (Uses)
 (heat-cationic polymerization initiator; epoxy-oxetane compns. with good
 curability for optical **waveguides**)

IT 104558-95-4, UVI 6990

RL: CAT (Catalyst use); USES (Uses)
 (**photocationic polymerization initiator**;
 epoxy-oxetane compns. with good curability for optical
waveguides)

IT 58162-44-0P

RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer
 in formulation); PREP (Preparation); USES (Uses)
 (epoxy-oxetane compns. with good curability for optical
waveguides)

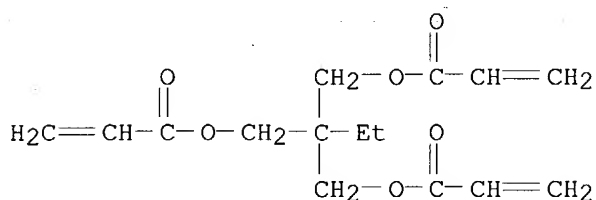
RN 58162-44-0 HCAPLUS

CN 2-Propenoic acid, 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-
 propanediyl ester, polymer with (1-methylethylidene)bis[4,1-phenyleneoxy(2-
 hydroxy-3,1-propanediyl)] di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 15625-89-5

CMF C15 H20 O6

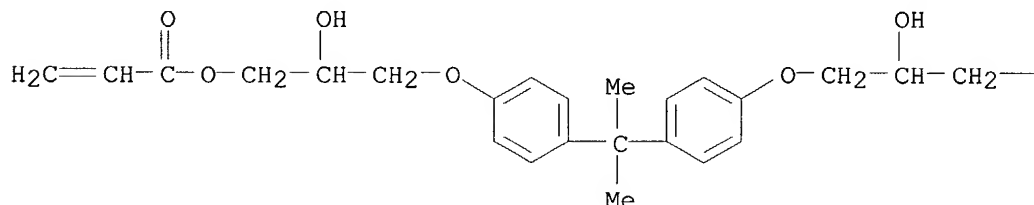


CM 2

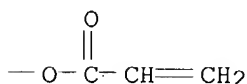
CRN 4687-94-9

CMF C27 H32 O8

PAGE 1-A



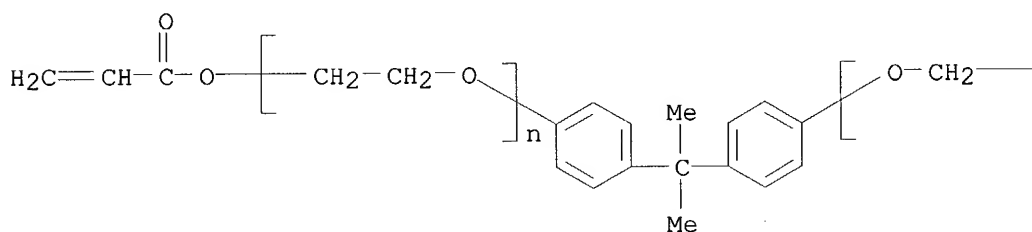
PAGE 1-B



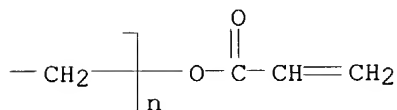
L48 ANSWER 13 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2003:453668 HCAPLUS
 DN 139:215201
 TI Photoinitiated cross-linking polymerization of monomer blends
 AU Decker, Christian
 CS Departement de Photochimie Generale (UMR-CNRS N°7525), Ecole
 Nationale Supérieure de Chimie de Mulhouse, Université de Haute-Alsace,
 Mulhouse, 68200, Fr.
 SO ACS Symposium Series (2003), 847(Photoinitiated Polymerization), 92-104
 CODEN: ACSMC8; ISSN: 0097-6156
 PB American Chemical Society
 DT Journal
 LA English
 AB A study of the light-induced crosslinking polymerization of blends of various
 monomers and functionalized **oligomers**, e.g. acrylate/epoxide,
 acrylate/vinyl ether, epoxide/vinyl ether, and acrylate/vinyl monomer,
 showed that photoinitiated polymerization of blends of multifunctional monomers
 is an effect method of producing polymer networks with well designed
 properties. The polymerization of each monomer blend was followed quant. by IR
 spectroscopy. Depending on the polymerization mechanism and the photoinitiator
 (radical or cationic), a variety of network architectures can be generated
 by a combination of different types of monomers. Interpenetrating polymer
 networks were generated by taking monomers which polymerized by different
 mechanisms, whereas crosslinked copolymers were obtained when either a
 radical or cationic-type mechanism was operative. All the polymer
 materials were produced within seconds at ambient temperature from solvent-free
 formulations. Their properties can be adjusted by acting on the monomer
 blend composition, depending on the considered application.
 CC 37-6 (Plastics Manufacture and Processing)
 IT Crosslinking
 (photochem.; photoinitiated crosslinking
 polymerization of monomer blends)
 IT Polymerization
 (photopolymn.; photoinitiated crosslinking
 polymerization of monomer blends)
 IT 9003-31-0D, Polyisoprene, epoxidized 64401-02-1, Ebecryl 150
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (interpenetrating network with Araldite CY-179; photoinitiated

crosslinking polymerization of monomer blends)
 IT 7473-98-5, Darocur 1173 75081-21-9, Isopropylthioxanthone 104558-95-4,
 Cyacure 6990 162881-26-7, Irgacure 819 189146-15-4, Lucirin TPO
 RL: CAT (Catalyst use); USES (Uses)
 (photoinitiator; in photoinitiated crosslinking
 polymerization of monomer blends)
 IT 64401-02-1, Ebecryl 150
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (interpenetrating network with Araldite CY-179; photoinitiated
 crosslinking polymerization of monomer blends)
 RN 64401-02-1 HCAPLUS
 CN Poly(oxy-1,2-ethanediyl), α,α' -[(1-methylethylidene)di-4,1-
 phenylene]bis[ω -[(1-oxo-2-propenyl)oxy]- (9CI) (CA INDEX NAME)

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PAGE 1-B



RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 14 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2003:452100 HCAPLUS
 DN 139:23285
 TI Optical fiber color wires, fast-curing coating materials therefor, and
 cable units therefrom with easy disassembly
 IN Tsuchiida, Satoru; Saito, Osamu
 PA Dainippon Ink and Chemicals, Inc., Japan
 SO Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003167177	A2	20030613	JP 2001-368560	20011203
PRAI	JP 2001-368560		20011203		

AB The coating materials comprise (A) radically polymerizable
 compds., (B) colorants, and (C) photopolymn. initiators
 comprising P-containing compds. and S-containing compds. Thus, an optical
 fiber

was coated with a composition comprising TDI hydroxypropyl acrylate adduct (1:2), ethoxylated trimethylolpropane triacrylate, ethoxylated bisphenol A diacrylate, phthalocyanine blue, 2,4,6-trimethylbenzoyldiphenylphosphine oxide, and 2-methyl-1-[4-(methylthio)phenyl]-2-morpholinopropanone-1 and exposed to UV to give a color wire with good cured property. Optical fiber tape containing 4 of the wires was easily disassembled by tearing without color layer delamination.

IC ICM G02B006-44

ICS C08F002-44; C08F283-12; C08F290-06; C08F292-00; G02B005-22;
G03F007-028

CC 42-7 (Coatings, Inks, and Related Products)

Section cross-reference(s): 73

IT 539836-23-2P, Bisphenol A diglycidyl ether homopolymer
acrylate-ethoxylated bisphenol A diacrylate-ethoxylated trimethylolpropane
triacrylate copolymer 539836-24-3P, Bisphenol A diglycidyl ether
homopolymer acrylate-ethoxylated trimethylolpropane triacrylate copolymer
539842-46-1P 539842-47-2P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)

(fast-curing color coatings for optical fiber wires and cable units
with easy disassembly)

IT 539836-23-2P, Bisphenol A diglycidyl ether homopolymer
acrylate-ethoxylated bisphenol A diacrylate-ethoxylated trimethylolpropane
triacrylate copolymer 539836-24-3P, Bisphenol A diglycidyl ether
homopolymer acrylate-ethoxylated trimethylolpropane triacrylate copolymer

RL: IMF (Industrial manufacture); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)

(fast-curing color coatings for optical fiber wires and cable units
with easy disassembly)

RN 539836-23-2 HCAPLUS

CN Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-,
homopolymer, 2-propenoate, polymer with α -hydro- ω -[(1-oxo-2-
propenyl)oxy]poly(oxy-1,2-ethanediyl) ether with 2-ethyl-2-(hydroxymethyl)-
1,3-propanediol (3:1), and α,α' -[(1-methylethylidene)di-4,1-
phenylene]bis[ω -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)]
(9CI) (CA INDEX NAME)

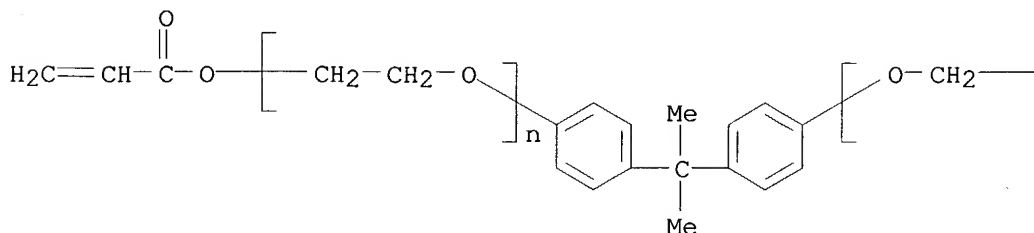
CM 1

CRN 64401-02-1

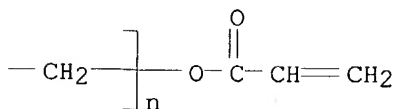
CMF (C2 H4 O)n (C2 H4 O)n C21 H20 O4

CCI PMS

PAGE 1-A



PAGE 1-B



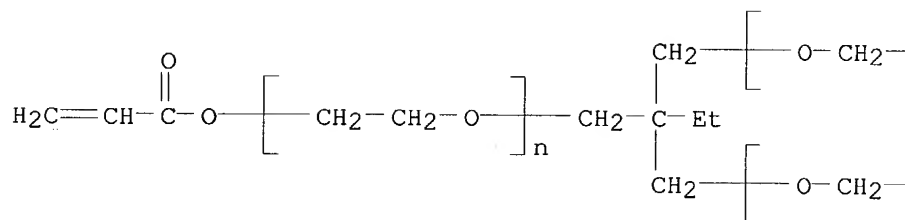
CM 2

CRN 28961-43-5

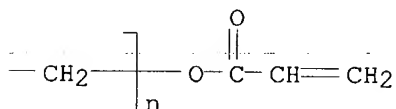
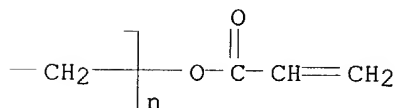
CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C15 H20 O6

CCI PMS

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PAGE 1-B



CM 3

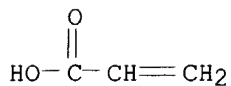
CRN 54847-34-6

CMF (C21 H24 O4)x . x C3 H4 O2

CM 4

CRN 79-10-7

CMF C3 H4 O2

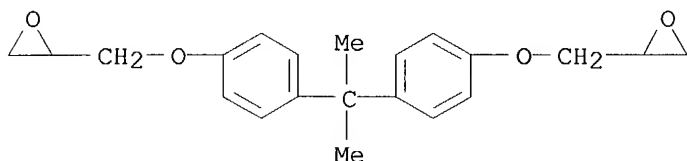


CM 5

CRN 25085-99-8
CMF (C21 H24 O4)x
CCI PMS

CM 6

CRN 1675-54-3
CMF C21 H24 O4

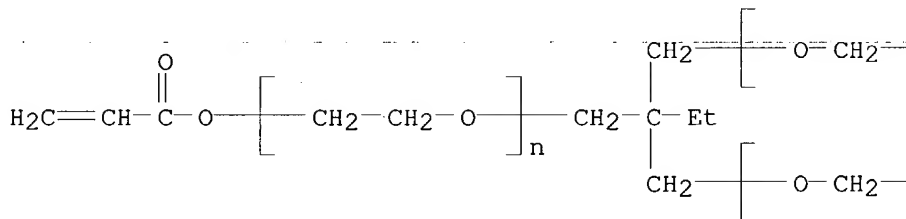


RN 539836-24-3 HCAPLUS
CN Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-, homopolymer, 2-propenoate, polymer with α -hydro- ω -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (9CI) (CA INDEX NAME)

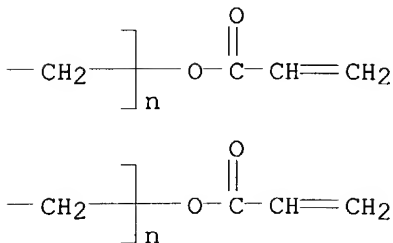
CM 1

CRN 28961-43-5
CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C15 H20 O6
CCI PMS

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PAGE 1-B



CM 2

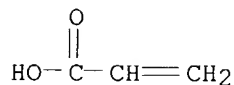
CRN 54847-34-6

CMF (C21 H24 O4)x . x C3 H4 O2

CM 3

CRN 79-10-7

CMF C3 H4 O2



CM 4

CRN 25085-99-8

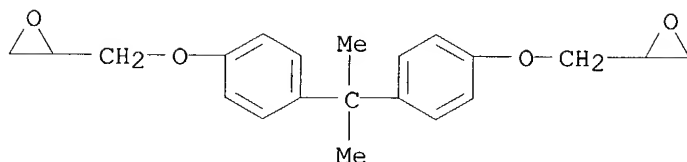
CMF (C21 H24 O4)x

CCI PMS

CM 5

CRN 1675-54-3

CMF C21 H24 O4



L48 ANSWER 15 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:132387 HCAPLUS

DN 138:161087

TI (Meth)acrylic oligomer composition, solder resist composition containing acrylic oligomer, and cured product

IN Koyanagi, Takao; Ozaki, Toru; Yokoshima, Minoru

PA Nippon Kayaku Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

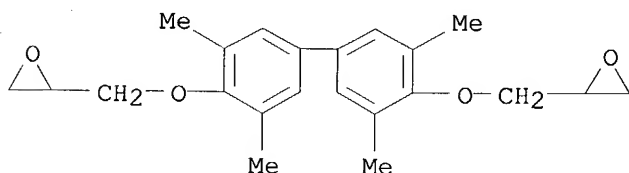
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003048932	A2	20030221	JP 2001-239312	20010807
PRAI	JP 2001-239312		20010807		

AB The composition contains a diluent and the (meth)acrylic oligomer prepared from a compound substituted with ≥ 2 epoxy groups, a carboxy-substituted rubber, a maleimide-substituted monobasic acid optionally associated with a polybasic acid, and a (meth)acryloyl-substituted

monobasic acid. The composition optionally associated with a **photopolymn** . **initiator** and a thermosetting component is used as a solder resist or a intermediate elec. insulator layer as the claimed cured product in a printed circuit board. The **composition**, showing enhanced **photosensitivity**, provides the cured product with good flexibility, affinity to electroless plating, etc.

- IC ICM C08F299-02
ICS C08F290-06; C08G059-16; H05K001-03; H05K003-28; H05K003-46
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38, 39, 76
- ST methacrylic **oligomer** solder resist compn; intermediate elec insulator resist printed circuit; epoxy compd carboxy rubber acrylic **oligomer**; maleimide monobasic acid epoxy compd **oligomer**
- IT Electric insulators
Photoresists
Printed circuit boards
Solder resists
((meth)acrylic **oligomer** composition for solder resist and intermediate elec. insulator in printed circuit board)
- IT Macromonomers
RL: TEM (Technical or engineered material use); USES (Uses)
((meth)acrylic **oligomer** composition for solder resist and intermediate elec. insulator in printed circuit board)
- IT Synthetic rubber, preparation
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic acid-acrylonitrile-butadiene, carboxy-terminated, Hycar CTBN1300X13, reaction product with epoxy resin and maleimide and (meth)acrylic acid; (meth)acrylic **oligomer** composition for solder resist and intermediate elec. insulator in printed circuit board)
- IT Polymerization catalysts
(photopolymn.; (meth)acrylic **oligomer** composition for solder resist containing)
- IT Epoxy resins, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(reaction product with carboxy0-containing rubber and maleimide and (meth)acrylic acid; (meth)acrylic **oligomer** composition for solder resist and intermediate elec. insulator in printed circuit board)
- IT 79-10-7DP, Acrylic acid, reaction product with epoxy resin and carboxy-containing rubber and maleimide 108-30-5DP, Succinic anhydride, reaction product with epoxy resin and carboxy-containing rubber and maleimide and (meth)acrylic acid 2426-02-0DP, Tetrahydrophthalic anhydride, reaction product with epoxy resin and carboxy-containing rubber and maleimide and (meth)acrylic acid 42423-25-6DP, Bisphenol F-epichlorohydrin copolymer, reaction product with carboxy-containing rubber and maleimide and (meth)acrylic acid 55750-53-3DP, reaction product with epoxy resin and carboxy-containing rubber and (meth)acrylic acid
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
((meth)acrylic **oligomer** composition for solder resist and intermediate elec. insulator in printed circuit board)
- IT 71868-10-5, Irgacure 907 82799-44-8, Kayacure DETX-S
RL: CAT (Catalyst use); USES (Uses)
((meth)acrylic **oligomer** composition for solder resist containing)
- IT 63957-64-2, DEN 438 77641-99-7, Kayarad DPHA 89118-70-7, YX 4000
RL: TEM (Technical or engineered material use); USES (Uses)
((meth)acrylic **oligomer** composition for solder resist containing)

IT 89118-70-7, YX 4000
 RL: TEM (Technical or engineered material use); USES (Uses)
 ((meth)acrylic **oligomer** composition for solder resist containing)
 RN 89118-70-7 HCAPLUS
 CN Oxirane, 2,2'-[(3,3',5,5'-tetramethyl[1,1'-biphenyl]-4,4'-
 diyl)bis(oxymethylene)]bis-, homopolymer (9CI) (CA INDEX NAME)
 CM 1
 CRN 85954-11-6
 CMF C22 H26 O4



L48 ANSWER 16 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2003:132379 HCAPLUS
 DN 138:154784
 TI Sheet-forming actinic energy ray-curable resins for optical instruments
 IN Sauchi, Yasuyuki; Igarashi, Ichiro; Matsuda, Yutaka; Tanaka, Junji
 PA Toa Gosei Chemical Industry Co., Ltd., Japan; Sumitomo Bakelite Co., Ltd.
 SO Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003048922	A2	20030221	JP 2001-237635	20010806
PRAI	JP 2001-237635		20010806		

AB The resins for forming heat-resistant, transparent sheets, contain (A) alkoxyated bis(hydroxyphenyl)fluorene di(meth)acrylates and optionally (B) **photopolymerization** initiators and (C) thermal **polymerization** initiators. Thus a 99:1 bisphenoxyethanol fluorene diacrylate-1-hydroxycyclohexyl Ph ketone mixture was cast on a framed glass plate and exposed to UV to give a 0.4-mm thick sheet showing color difference (JIS K 5400, after 1 h at 210°) ΔE 8.6 and ΔY 12.5, Tg 167°, and water absorption 0.8% after 20 h in 80°-water.

IC ICM C08F020-30

ICS C08F290-06; G02B001-04

CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 73

IT 246858-42-4P 496046-49-2P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (actinic energy ray-curable resins for heat-resistant transparent optical sheets)

IT 246858-42-4P 496046-49-2P

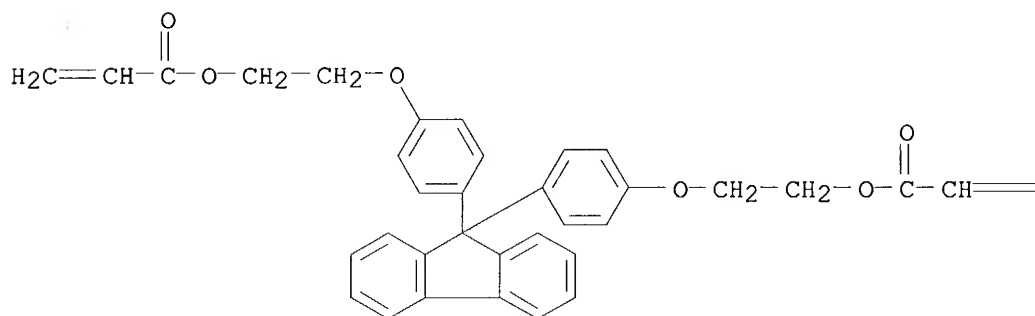
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (actinic energy ray-curable resins for heat-resistant transparent

optical sheets)
 RN 246858-42-4 HCAPLUS
 CN 2-Propenoic acid, 9H-fluoren-9-ylidenebis(4,1-phenyleneoxy-2,1-ethanediyl)
 ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 161182-73-6
 CMF C35 H30 O6

PAGE 1-A



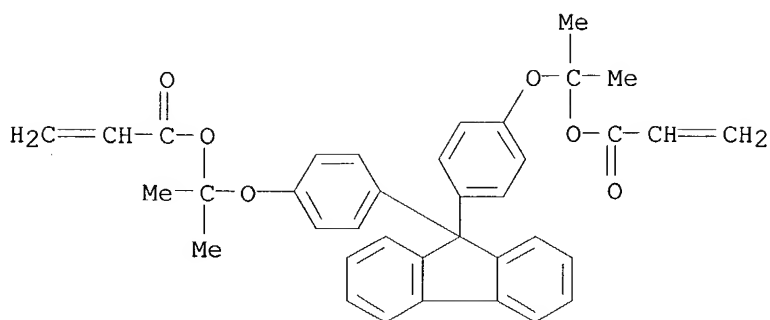
PAGE 1-B

=CH₂

RN 496046-49-2 HCAPLUS
 CN 2-Propenoic acid, 9H-fluoren-9-ylidenebis[4,1-phenyleneoxy(1-methylethylidene)] ester, homopolymer (9CI) (CA INDEX NAME)

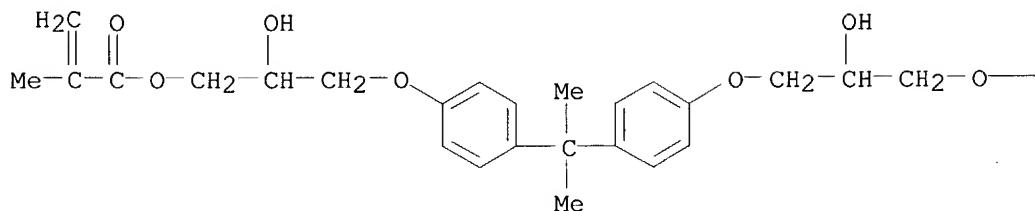
CM 1

CRN 496046-48-1
 CMF C37 H34 O6

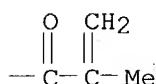


L48 ANSWER 17 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2003:82232 HCAPLUS
 DN 139:185584
 TI Determination of the quantity of residual double bonds in dental polymers
 AU Prejmerean, Cristina; Moldovan, Marioara; Brie, Maria; Mateiu, Adriana;
 Furtos, Gabriel
 CS "Raluca Ripan" Institute of Chemistry, Cluj-Napoca, 3400, Rom.
 SO Proceedings of the Romanian Academy, Series B: Chemistry, Life Sciences
 and Geosciences (2001), 3(2), 91-97
 CODEN: PRACFP; ISSN: 1454-8267
 PB Editura Academiei Romane
 DT Journal
 LA English
 AB A series of 20 exptl. monomers mixts. of different compns. has been prepared
 from the aromatic (Bis-GMA)0-2 superior **oligomers**, (modified
 Bis-GMA)0-2 superior **oligomers**, Bis-DMA monomer and the diluting
 aliphatic monomers, triethylene glycol dimethacrylate (TEGDMA),
 monoethyleneglycol dimethacrylate (EGDMA) and hydroxyethyl methacrylate
 (HEMA). The monomers mixts. have been used to obtain copolymers by chemical,
 resp. by **photochem. initiation of polymerization**
 The copolymers have been investigated by IR spectroscopy method in order
 to evaluate the quantity of the residual double bonds (RDB). The quantity
 of unreacted methacrylate groups has been determined in percents of the
 methacrylate groups originally present in the unpolymd. material. The RDB
 ranged between 23% for the light cured copolymer originating from the
 monomer mixture containing 30% (Bis-GMA)0-2 and 70% TEGDMA, and 45% for the
 polymer originating from (Bis-GMA)0-2 **oligomers**. The obtained
 results pointed out as a general conclusion, the obtaining of a smaller
 quantity of residual double bonds in the case of light cured copolymers
 than in the case of chemical cured materials, as well as the increasing of
 RDB with the increasing of the aromatic **oligomers** amount in the mixture
 CC 63-7 (Pharmaceuticals)
 IT 97-90-5, Ethyleneglycol dimethacrylate 109-16-0, Triethylene glycol
 dimethacrylate 868-77-9 **1565-94-2**, Bis-GMA
 RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES
 (Uses)
 (determination of quantity of residual double bonds in dental polymers)
 IT **1565-94-2**, Bis-GMA
 RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES
 (Uses)
 (determination of quantity of residual double bonds in dental polymers)
 RN 1565-94-2 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis[4,1-phenyleneoxy(2-
 hydroxy-3,1-propanediyl)] ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 18 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:68634 HCAPLUS

DN 138:123971

TI Photocurable compositions with rapid curability and low viscosity and optical fiber units using them

IN Ii, Masahiro; Oshio, Atsushi; Saito, Osamu

PA Dainippon Ink and Chemicals, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1.

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003026738	A2	20030129	JP 2001-210685	20010711

PRAT	JP	2001-210685			20010711
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AB Title compns. comprise (A) radically polymerizable **oligomers**
containing 20-55% urethane acrylates with number-average mol. weight (Mn)
1700-3500 and

10-45% urethane acrylates with M_n 300-1500 and (B) radically polymerizable monomers containing 15-40% cyclic structure-containing bifunctional monomers having ≥ 2 ether bonds with mol. weight 300-800 and 5-30% monofunctional monomers giving homopolymers with glass transition temperature $\geq 50^\circ$. The optical fiber units have outermost layers obtained by curing the compns. Thus, a composition containing a urethane

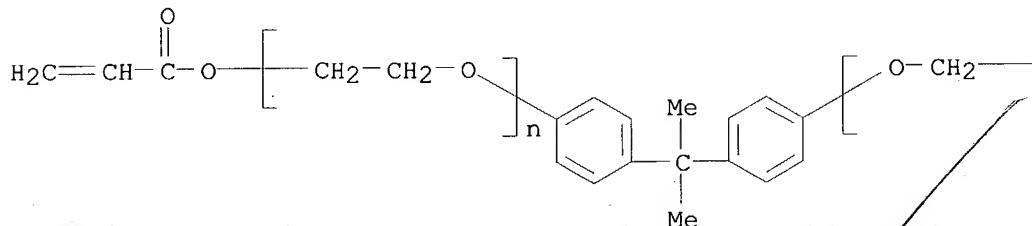
acrylate

oligomer prepared from 2,4-TDI, polypropylene glycol, and 2-hydroxyethyl acrylate, a urethane acrylate **oligomer** prepared from 2,4-TDI, tripropylene glycol, 2-hydroxypropyl acrylate, and isobornyl acrylate, N-vinyl-2-pyrrolidone, bisphenol A-ethylene oxide adduct diacrylate, and a mixture of bis(2,6-dimethoxybenzoyl)-2,4,4-trimethylpentyl phosphine oxide and 1-hydroxycyclohexyl Ph ketone was applied on an acrylic sheet and irradiated with UV light to give a coating with good water resistance.

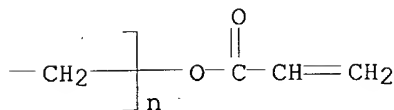
IC ICM C08F290-06

ICS C03C025-24; C09D004-00; C09D171-00; C09D175-14; G02B006-44
 CC 42-7 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 73
 IT 88-12-0, N-Vinyl-2-pyrrolidone, uses 5888-33-5, Isobornyl acrylate
 64401-02-1, Bisphenol A-ethylene oxide adduct diacrylate
 87320-05-6
 RL: RCT (Reactant); TEM (Technical or engineered material use); RACT
 (Reactant or reagent); USES (Uses)
 (photocurable urethane acrylate compns. for water-resistant coatings of
 optical fiber units)
 IT 492-22-8, Thioxanthone 947-19-3, 1-Hydroxycyclohexyl phenyl ketone
 24650-42-8, 2,2-Dimethoxy-2-phenylacetophenone 75980-60-8,
 2,4,6-Trimethylbenzoyldiphenylphosphine oxide 104005-37-0,
 3,6-Bis(2-methyl-2-morpholinopropionyl)-9-octylcarbazole 145052-34-2,
 Bis(2,6-dimethoxybenzoyl)-2,4,4-trimethylpentylphosphine oxide
 RL: CAT (Catalyst use); USES (Uses)
 (photopolymn. initiators; photocurable urethane
 acrylate compns. for water-resistant coatings of optical fiber units)
 IT 64401-02-1, Bisphenol A-ethylene oxide adduct diacrylate
 RL: RCT (Reactant); TEM (Technical or engineered material use); RACT
 (Reactant or reagent); USES (Uses)
 (photocurable urethane acrylate compns. for water-resistant coatings of
 optical fiber units)
 RN 64401-02-1 HCAPLUS
 CN Poly(oxy-1,2-ethanediyl), α,α' -[(1-methylethylidene)di-4,1-
 phenylene]bis[ω -[(1-oxo-2-propenyl)oxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L48 ANSWER 19 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2002:626791 HCAPLUS
 DN 137:325688
 TI Spatially resonated excitation of a dichroic photoinitiator to form a
 deformed-helix cholesteric network
 AU Broer, D. J.; Mol, G. N.; van Haaren, J. A. M. M.; Lub, J.; Huck, N.
 CS Philips Research Laboratories, Eindhoven, 5656 AA, Neth.
 SO Polymer Preprints (American Chemical Society, Division of Polymer
 Chemistry) (2002), 43(2), 526-527

CODEN: ACPPAY; ISSN: 0032-3934

PB American Chemical Society, Division of Polymer Chemistry

DT Journal; (computer optical disk)

LA English

AB The use of a dichroic photoinitiator enables control over polymerization kinetics

by the state of polarization of UV light that is used to initiate the polymerization process. When a dichroic photoinitiator is used in the polymerization of

a chiral-nematic monomer mixture in combination with polarized UV light, the polymerization kinetics are modulated over the length scale of half the cholesteric pitch. This induces diffusion processes where the most reactive components of the mixture diffuse towards the volume area with the highest polymerization rate. Consequently the helixes of the cholesteric networks formed are periodically deformed. Helix deformation gives higher order reflections and a built-in optical retardation. When the deformed helix is combined with a pitch gradient over the film thickness, the built-in retardation can be used for wide-band cholesteric polarizers that directly generate linearly polarized light without an addnl. quarter-wave foil.

CC 35-3 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 36, 73, 75

IT **Polymerization** catalysts

Polymerization kinetics

(**photopolymn.**; use of dichroic **photoinitiator** to control **polymerization** rate of chiral monomers via spatially resonated excitation to form a deformed-helix cholesteric network)

IT 229625-65-4

RL: CAT (Catalyst use); USES (Uses)

(dichroic **photoinitiator**; use of dichroic **photoinitiator** to control **polymerization** rate of chiral monomers via spatially resonated excitation to form a deformed-helix cholesteric network)

IT 123864-17-5 164590-18-5 193146-12-2 204063-36-5

RL: CPS (Chemical process); PEP (Physical, engineering or chemical

process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)

(use of dichroic photoinitiator to control polymerization rate of chiral monomers via spatially resonated excitation to form a deformed-helix cholesteric network)

IT 123864-17-5 164590-18-5

RL: CPS (Chemical process); PEP (Physical, engineering or chemical

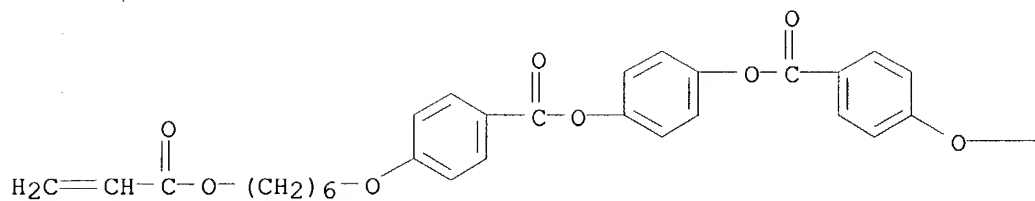
process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)

(use of dichroic photoinitiator to control polymerization rate of chiral monomers via spatially resonated excitation to form a deformed-helix cholesteric network)

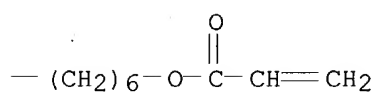
RN 123864-17-5 HCAPLUS

CN Benzoic acid, 4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]-, 1,4-phenylene ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

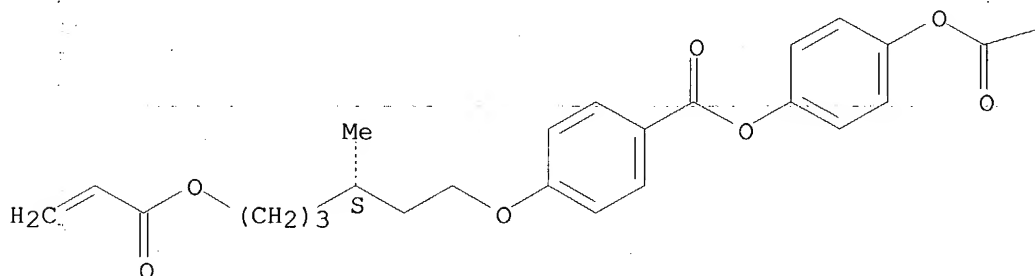


RN 164590-18-5 HCAPLUS

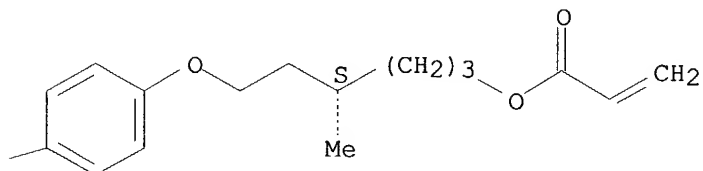
CN Benzoic acid, 4-[[[(3S)-3-methyl-6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]-, 1,4-phenylene ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

L48 ANSWER 20 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2002:466568 HCAPLUS
 DN 137:48644
 TI Poly(meth)acrylic photochromic coatings
 IN Welch, Cletus N.; Walters, Robert W.; McKeough, David T.; King, Eric M.
 PA USA
 SO U.S. Pat. Appl. Publ., 18 pp., Cont.-in-part of U.S. Ser. No. 345,028,
 abandoned.
 CODEN: USXXCO
 DT Patent
 LA English
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002076549	A1	20020620	US 2001-946386	20010904
	US 6602603	B2	20030805		
PRAI	US 1999-345028	B2	19990702		

AB Articles, especially optical elements such as lenses, comprising, in combination, a substrate and a photochromic poly(meth)acrylic coating on ≥ 1 surface of the substrate are described in which the coating comprises a polymer of ≥ 2 difunctional (meth)acrylate monomers selected from monomers having the general formulas $H_2C:C(R_1)-C(:O)-(O-CH(R_2)-CH_2)m-O-A-O-(CH_2-CH(R_2)-O)n-C(:O)-C(R_1):CH_2$ and $H_2C:C(R_1)-C(:O)-O-[(C_2H_4O)x(C_3H_6O)y(C_4H_8O)z]-O-C(:O)-C(R_1):CH_2$ ($R_1 = H$ or Me ; $R_2 = H$ or C_1-C_2 alkyl, $A =$ a divalent linking group; $m, n > 0$; $3 < m + n < 15$; x, y, z are between 0 and less than 15; and $3 < x + y + z < 15$), a photochromic amount of a photochromic component, and 0-10 weight %, based on the total weight of monomers, of **polymerization initiator** selected from thermal **initiators**, **photoinitiators** or mixts. of such **initiators**, the coating being free of chain transfer agents; the components are used in such proportions to produce a photochromic poly(meth)acrylic coating having a Fischer microhardness of 50-150 Newtons per mm^2 , a ΔOD at 30 s of ≥ 0.15 and at 15 min of ≥ 0.50 , and a bleach rate of ≤ 200 s (all as measured at 22°).

IC ICM B32B017-10
 ICS G02B005-28

NCL 428332000

CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 63, 73

IT **117647-37-7P**, Ethoxylated bisphenol A dimethacrylate-polyethylene glycol dimethacrylate copolymer
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (articles with poly(meth)acrylic photochromic coatings)

IT 9003-20-7, Poly(vinyl acetate) 9011-14-7, Poly(methyl methacrylate) 25721-76-0, Poly(ethylene glycol dimethacrylate) **64696-13-5**, Poly(ethoxylated bisphenol A dimethacrylate)
 RL: TEM (Technical or engineered material use); USES (Uses) (articles with poly(meth)acrylic photochromic coatings)

IT **117647-37-7P**, Ethoxylated bisphenol A dimethacrylate-polyethylene glycol dimethacrylate copolymer
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (articles with poly(meth)acrylic photochromic coatings)

RN 117647-37-7 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α, α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -(2-methyl-1-oxo-2-propenyl)oxy]-, polymer with

α -(2-methyl-1-oxo-2-propenyl)- ω -[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

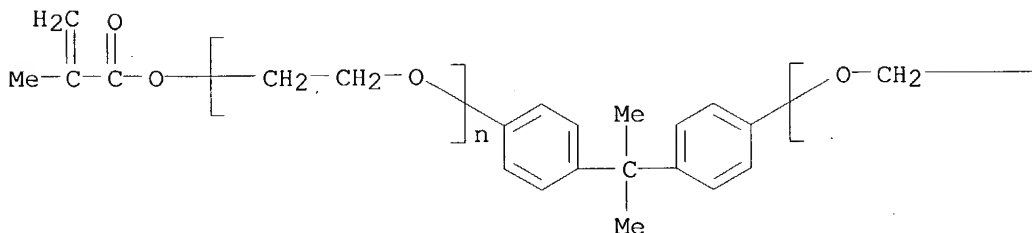
CM 1

CRN 41637-38-1

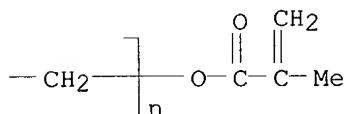
CMF (C2 H4 O)_n (C2 H4 O)_n C23 H24 O4

CCI PMS

PAGE 1-A



PAGE 1-B

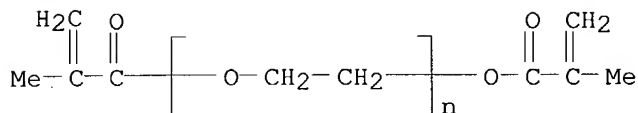


CM 2

CRN 25852-47-5

CMF (C2 H4 O)_n C8 H10 O3

CCI PMS



IT **64696-13-5**, Poly(ethoxylated bisphenol A dimethacrylate)
 RL: TEM (Technical or engineered material use); USES (Uses)
 (articles with poly(meth)acrylic photochromic coatings)
 RN 64696-13-5 HCAPLUS
 CN Poly(oxy-1,2-ethanediyl), α, α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -(2-methyl-1-oxo-2-propenyl)oxy]-, homopolymer (9CI)
 (CA INDEX NAME)

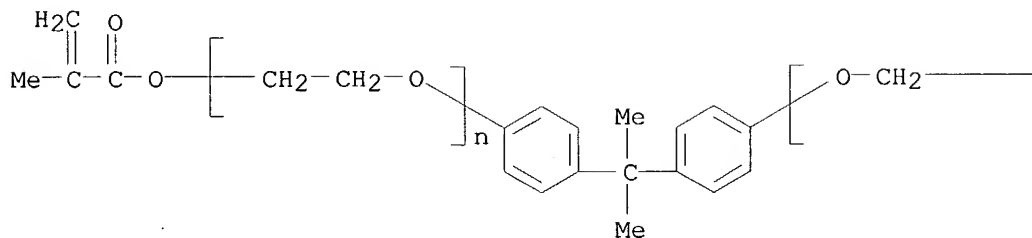
CM 1

CRN 41637-38-1

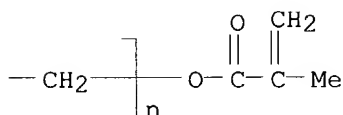
CMF (C2 H4 O)_n (C2 H4 O)_n C23 H24 O4

CCI PMS

PAGE 1-A



PAGE 1-B



L48 ANSWER 21 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:153021 HCAPLUS

DN 136:185090

TI Epoxy resin composition for anisotropic light-scattering film with improved brightness, fineness, and contrast

IN Kume, Makoto; Nagasaki, Yoshinori; Oe, Yasushi

PA Toppan Printing Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002062411	A2	20020228	JP 2000-247628	20000817
PRAI	JP 2000-247628		20000817		

AB Title composition comprises (A) ≥ 1 cationically polymerizable compound, (B) radically **polymerizable** compound, (C) radical **photoinitiator**, (D) cationic thermal **polymerization initiator**, wherein the refractive index of (B) is higher than that of (A). Thus, a composition comprising Denacol EX-861 100, Viscoat 192 50, Irgacure 184 3, and SI 100L 3 parts was applied on a blue glass plate, irradiated, and heated to form a film, showing light transmittance at an angle 0° and 40°, 82% and 14%, resp..

IC ICM G02B005-02

ICS C08F002-48; C08F016-14; C08F020-32; G02B005-32; G02F001-1335; G03F007-004; G03F007-027; G03F007-028

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 73, 74

IT 400038-89-3P 400038-90-6P 400038-91-7P **400038-92-8P**

RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)

(manufacture of epoxy resin composition for anisotropic-light scattering film)

IT **400038-92-8P**

RL: DEV (Device component use); IMF (Industrial manufacture); PRP

(Properties); PREP (Preparation); USES (Uses)

(manufacture of epoxy resin composition for anisotropic-light scattering film)

RN 400038-92-8 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α, α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -[(1-oxo-2-propenyl)oxy]-, polymer with α -(oxiranylmethyl)- ω -(oxiranylmethoxy)poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

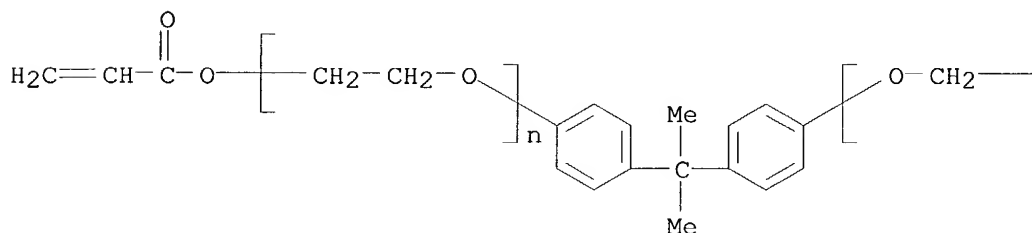
CM 1

CRN 64401-02-1

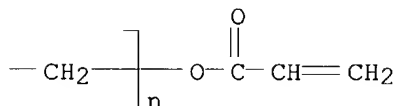
CMF (C2 H4 O)n (C2 H4 O)n C21 H20 O4

CCI PMS

PAGE 1-A



PAGE 1-B

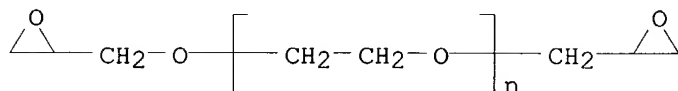


CM 2

CRN 26403-72-5

CMF (C2 H4 O)n C6 H10 O3

CCI PMS



L48 ANSWER 22 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2001:903478 HCAPLUS

DN 136:29076

TI Optical **waveguide** using reactive oxetane **oligomer**

IN Tomaru, Akira; Maruno, Toru; Enbutsu, Koji; Murata, Norio

PA Nippon Telegraph and Telephone Corp., Japan; Ntt Advanced Technology Corp.

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001343539	A2	20011214	JP 2000-165296	20000602
PRAI	JP 2000-165296		20000602		

AB The **waveguide** has a core or cladding made of a polymeric film obtained by curing of a mixture containing ≥ 1 oxetane derivative 3-(R1,R2)oxetane (R1, R2 = substituents having alkyl, alkoxy, ether, CO2H, amino, aldehyde, epoxy, aromatic ring, heterocycle, oxetane ring, fluorohydrocarbon, chlorohydrocarbon, CO, and/or thiocarbonyl) and thermal or photochem. polymerization initiators. The **waveguide** showing high reliability and low loss is obtained at low cost.

IC ICM G02B006-12

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
 Section cross-reference(s): 38

ST optical **waveguide** oxetane polymer core cladding

IT Optical **waveguides**
 (optical **waveguide** using reactive oxetane oligomer)

IT 188308-42-1P 188582-82-3P
 RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
 (optical **waveguide** using reactive oxetane oligomer)

IT 188308-42-1P
 RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
 (optical **waveguide** using reactive oxetane oligomer)

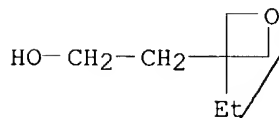
RN 188308-42-1 HCAPLUS

CN 3-Oxetaneethanol, 3-ethyl-, polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

CM 1

CRN 188582-82-3

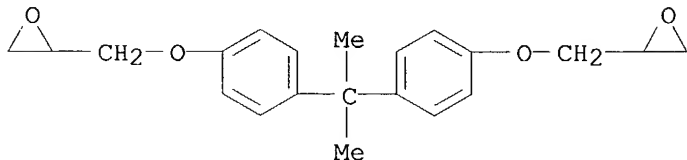
CMF C7 H14 O2



CM 2

CRN 1675-54-3

CMF C21 H24 O4



L48 ANSWER 23 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STM

AN 2001:662917 HCAPLUS

DN 135:344813

TI Two-photon induced photoinitiated polymerization

AU Belfield, Kevin D.; Liu, Jun; Schafer, Katherine J.; Andrasik, Stephen J.

CS Department of Chemistry and CREOL/School of Optics, University of Central Florida, Orlando, FL, 32816-2366, USA

SO Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (2001), 42(2), 713-714

CODEN: ACPPAY; ISSN: 0032-3934

PB American Chemical Society, Division of Polymer Chemistry

DT Journal; (computer optical disk)

LA English

AB Near-IR two-photon induced free radical polymerization of (meth)acrylate monomers

and near-IR two-photon induced cationic polymerization of epoxide and vinyl ether

monomers were carried out in the presence of photoinitiator systems. The monomers include ethoxylated bisphenol A diacrylate (SR349, Sartomer), pentaacrylate ester (SR9041, Sartomer), aromatic urethane acrylate blended with tripropylene glycol diacrylate (CN973-A80, Sartomer), etc. The initiators are 5,7-diiodo-3-butoxy-6-fluorone (H-Nu 470, Spectra Group Ltd.), isopropylthioxanthone (ITX), benzoin Me ether (BME), acylphosphine oxide (Irgacure 819, Ciba), diaryliodonium salt (CD-1012, Sartomer), and triarylsulfonium salt (CD-1010, Sartomer). Several single-photon visible photoinitiators and chromophores were synthesized which possess high two-photon absorption [2PA] cross sections and were also evaluated as photoinitiators. Two-photon induced acid generation in Epon SU-8 and K126, an acid sensitive photoresponsive polymer film with CD-1010 cationic photoinitiator produced 3-D lithog. imaging via fluorescence quenching and fluorescence enhancement.

CC 35-3 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 36, 73

ST radical polymn photoinitiator single photon

prepn activity; photoresponsive polymer cationic photoinitiator lithog imaging; fluorescence quenching enhancement lithog imaging photoinitiator

IT Polymerization catalysts

(cationic, photochem.; effectiveness of

photoinitiators in two-photon polymerization of

photoresponsive monomers and polymers toward 3-D lithog. imaging use)

IT Fluorescence

Fluorescence quenching

Light-sensitive materials

Photolithography

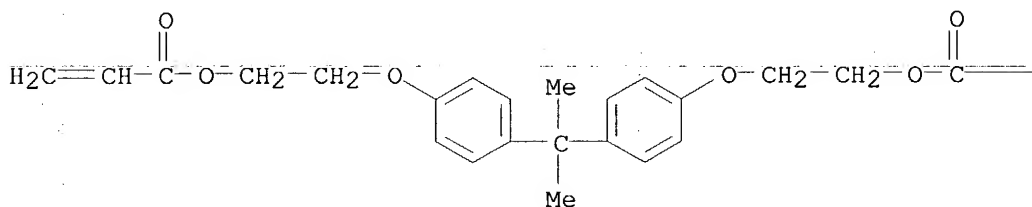
(effectiveness of photoinitiators in two-photon

polymerization of photoresponsive monomers and polymers toward 3-D lithog. imaging use)

IT Polymerization catalysts

- (photochem., radical; effectiveness of
photoinitiators in two-photon **polymerization** of
 photoresponsive monomers and polymers toward 3-D lithog. imaging use)
- IT 24447-78-7, SR 349 25085-98-7, K 126 42978-66-5, Tripropylene
 glycol diacrylate 60506-81-2, SR 9041 177403-04-2, Epon SU-8
 201615-27-2, CN 973
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC
 (Process); RACT (Reactant or reagent)
 (effectiveness of **photoinitiators** in two-photon
polymerization of photoresponsive monomers and polymers toward 3-D
 lithog. imaging use)
- IT 3524-62-7, Benzoin methyl ether 75081-21-9, Isopropylthioxanthone
 139301-16-9, CD-1012 161728-47-8, H-Nu 470 162881-26-7, Irgacure 819
 RL: CAT (Catalyst use); USES (Uses)
 (photoinitiator; effectiveness of **photoinitiators**
 in two-photon **polymerization** of photoresponsive monomers
 and polymers toward 3-D lithog. imaging use)
- IT 189201-19-2, CD-1010
 RL: CAT (Catalyst use); USES (Uses)
 (triarylsulfonium hexafluoroantimonate, **photoinitiator**;
 effectiveness of **photoinitiators** in two-photon
polymerization of photoresponsive monomers and polymers toward 3-D
 lithog. imaging use)
- IT 24447-78-7, SR 349
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC
 (Process); RACT (Reactant or reagent)
 (effectiveness of **photoinitiators** in two-photon
polymerization of photoresponsive monomers and polymers toward 3-D
 lithog. imaging use)
- RN 24447-78-7 HCAPLUS
 CN 2-Propenoic acid, (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl)
 ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

—CH=CH2

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 24 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2001:31547 HCAPLUS
 DN 134:87693

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

TI Poly(meth)acrylic photochromic coating
 IN Welch, Cletus N.; Walters, Robert W.; McKeough, David T.; King, Eric
 PA PPG Industries Ohio, Inc., USA
 SO PCT Int. Appl., 53 pp.

CODEN: PIXXD2

DT Patent
 LA English
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001002449	A2	20010111	WO 2000-US18316	20000630
	WO 2001002449	A3	20020124		
	W:		AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM		
	RW:		GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG		
	AU 2000059113	A5	20010122	AU 2000-59113	20000630
	AU 769249	B2	20040122		
	EP 1194487	A2	20020410	EP 2000-945126	20000630
	R:		AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO		
	BR 2000012206	A	20020723	BR 2000-12206	20000630
	JP 2003504651	T2	20030204	JP 2001-508236	20000630
PRAI	US 1999-345028	A	19990702		
	WO 2000-US18316	W	20000630		
AB	Article comprising, in combination, a substrate and a photochromic poly(meth)acrylic coating on at least one surface of said substrate, said coating consisting essentially of a polymerizate of: (a) at least two difunctional (meth)acrylate, (b) 0.5-40.0%, of a photochromic component; and (c) 0-10% of polymerization initiator selected from thermal initiators, photoinitiators or mixts. of such initiators , the coating being substantially free of materials selected from the group consisting of 2,4-diphenyl-4-methyl-1-pentene, dodecyl mercaptan, Bu mercaptan, diisopropenylbenzene and thiophenol. The coatings exhibit a Fischer microhardness of from 50 to 150 Newtons per mm ² and improved photochromic performance properties, i.e., the formation of darker activated colors and faster rates of photochromic activation and fade when irradiated with UV light. Also described are photochromic poly(meth)acrylic articles.				
IC	ICM C08F022-200				
CC	42-10 (Coatings, Inks, and Related Products)				
	Section cross-reference(s): 73				
IT	117647-37-7P , Ethoxylated bisphenol A dimethacrylate-polyethylene glycol dimethacrylate copolymer				
	RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (poly(meth)acrylic photochromic coating)				
IT	9003-20-7, Poly(vinyl acetate) 9011-14-7, Poly(methyl methacrylate) 25721-76-0, Poly(ethylene glycol dimethacrylate) 64696-13-5 , Poly(ethoxylated bisphenol A dimethacrylate)				
	RL: MSC (Miscellaneous) (substrate; poly(meth)acrylic photochromic coating)				
IT	117647-37-7P , Ethoxylated bisphenol A dimethacrylate-polyethylene glycol dimethacrylate copolymer				

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (poly(meth)acrylic photochromic coating)

RN 117647-37-7 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α, α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -(2-methyl-1-oxo-2-propenyl)oxy]-, polymer with α -(2-methyl-1-oxo-2-propenyl)- ω -(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

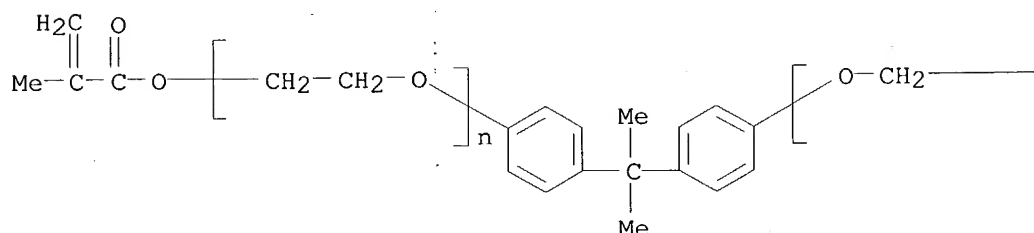
CM 1

CRN 41637-38-1

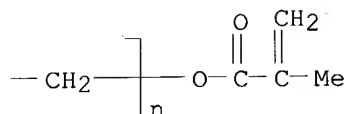
CMF (C2 H4 O)_n (C2 H4 O)_n C23 H24 O4

CCI PMS

PAGE 1-A



PAGE 1-B

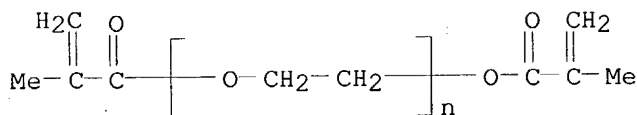


CM 2

CRN 25852-47-5

CMF (C2 H4 O)_n C8 H10 O3

CCI PMS



IT **64696-13-5**, Poly(ethoxylated bisphenol A dimethacrylate)

RL: MSC (Miscellaneous)

(substrate; poly(meth)acrylic photochromic coating)

RN 64696-13-5 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α, α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -(2-methyl-1-oxo-2-propenyl)oxy]-, homopolymer (9CI) (CA INDEX NAME)

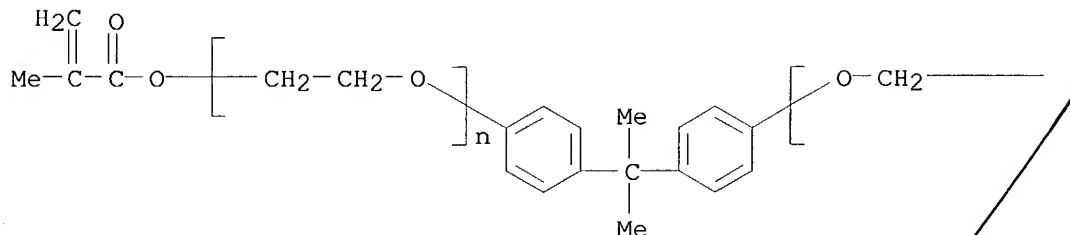
CM 1

CRN 41637-38-1

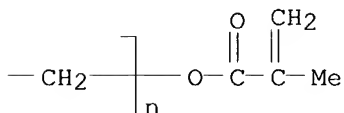
CMF (C2 H4 O)n (C2 H4 O)n C23 H24 O4

CCI PMS

PAGE 1-A



PAGE 1-B



L48 ANSWER 25 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:851236 HCAPLUS

DN 134:30143

TI Photocurable resin compositions with good curability, covering materials, and optical fibers therewith

IN Kondo, Kazunori; Ohba, Toshio

PA Shin-Etsu Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000336127	A2	20001205	JP 1999-149652	19990528
PRAI	JP 1999-149652		19990528		

AB The comps. contain ethylenically unsatd. group-containing **oligomers**, cationically **polymerizable** monomer diluents, **initiators** for cationic **photopolymer.**, and **initiators** for radical **photopolymer.** A composition comprised reaction product of 2-hydroxyethyl acrylate with 2,4-TDI-polypropylene glycol-polytetramethylene glycol **oligomer** 60, cyclohexyl vinyl ether 20, dodecyl vinyl ether 20, Irganox 1035 0.2, bis(4-C10-14 alkylphenyl)iodonium hexafluoroantimonate 1.5, and Darocure 1173 1.5 parts. A film comprising a cured product of the composition showed good moisture and heat resistance.

IC ICM C08F290-06

ICS C03C025-24; C08G059-40; C09D005-00; C09D163-00; C09D175-14; G02B006-44

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 73

IT 7473-98-5 174285-64-4, Irgacure 1700

RL: CAT (Catalyst use); USES (Uses)

(initiator for radical polymerization;

photocurable resin compns. with good curability for optical fiber covering materials)

IT 311311-67-8P, Cyclohexyl vinyl ether-dodecyl vinyl ether-2-hydroxyethyl acrylate-polypropylene glycol-poly(tetramethylene glycol)-2,4-TDI copolymer 311311-68-9P, Cyclohexyl vinyl ether-2-hydroxyethyl acrylate-polyethylene glycol bisphenol A ether-poly(tetramethylene glycol)-2,4-TDI-triethylene glycol divinyl ether copolymer 311311-69-0P, 2-Hydroxyethyl acrylate-dodecyl vinyl ether-polypropylene glycol-2,4-TDI copolymer 311311-70-3P, 2-Hydroxyethyl acrylate-triethylene glycol divinyl ether-polypropylene glycol-2,4-TDI copolymer 311342-96-8P, Epikote 828XA-lauryl acrylate-tricyclodecanedimethanol diacrylate copolymer

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(photocurable resin compns. with good curability for optical fiber covering materials)

IT 311342-96-8P, Epikote 828XA-lauryl acrylate-tricyclodecanedimethanol diacrylate copolymer

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(photocurable resin compns. with good curability for optical fiber covering materials)

RN 311342-96-8 HCAPLUS

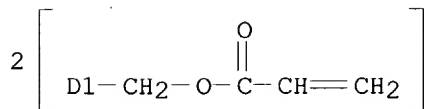
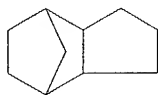
CN 2-Propenoic acid, (octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene) ester, polymer with dodecyl 2-propenoate and 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

CM 1

CRN 42594-17-2

CMF C18 H24 O4

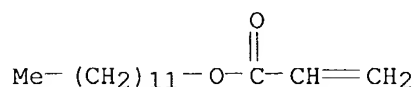
CCI IDS.



CM 2

CRN 2156-97-0

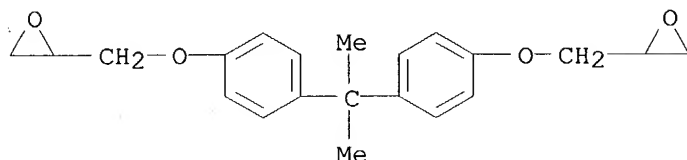
CMF C15 H28 O2



CM 3

CRN 1675-54-3

CMF C21 H24 O4



L48 ANSWER 26 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:833385 HCAPLUS

DN 134:5969

TI Active energy-curable acrylic protective coating films and optical disks therewith

IN Fujimoto, Hisakazu; Nushi, Seiji; Fukushima, Hiroshi

PA Mitsubishi Rayon Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000327951	A2	20001128	JP 1999-138771	19990519
PRAI	JP 1999-138771		19990519		

AB Title films are prepared from compns. containing (meth)acryloyl group-containing

compds. and **photochem. polymerization initiators**

and curable by ≤ 400 -nm active energy to form products having gel content of $\geq 91\%$. A composition containing initiators, bisphenol A epoxy diacrylate, pentaerythritol triacrylate, 1,6-hexanediol diacrylate, and isobornyl acrylate was cured by 350-mW/cm² UV to form a product with gel content of 93%. A Panlite AD 9000TG disk was deposited with A 6061 (Al alloy), coated with the above composition, and UV-cured to form a disk with maximum warping angle 1.0 m-rad initially and 4.0 m-rad after 100 h at 80° and 90% relative humidity.

IC ICM C09D004-00

ICS G11B007-24

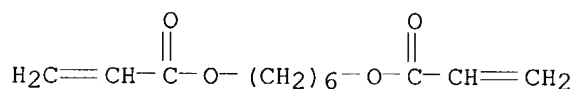
CC 42-7 (Coatings, Inks, and Related Products)

Section cross-reference(s): 73

IT **308809-98-5P**, Bisphenol A diglycidyl ether diacrylate-1,6-Hexanediol diacrylate-isobornyl acrylate-pentaerythritol triacrylate copolymer

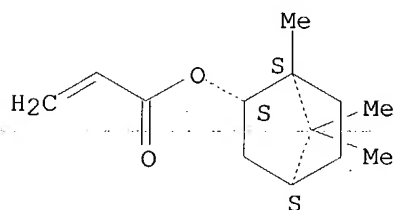
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (UV-curable acrylic protective coatings with high durability for optical disks)

IT 308809-98-5P, Bisphenol A diglycidyl ether diacrylate-1,6-Hexanediol diacrylate-isobornyl acrylate-pentaerythritol triacrylate copolymer
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (UV-curable acrylic protective coatings with high durability for optical disks)
 RN 308809-98-5 HCAPLUS
 CN 2-Propenoic acid, 1,6-hexanediyl ester, polymer with 2-(hydroxymethyl)-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] di-2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI) (CA INDEX NAME)
 CM 1
 CRN 13048-33-4
 CMF C12 H18 O4



CM 2
 CRN 5888-33-5
 CMF C13 H20 O2

Relative stereochemistry.



CM 3
 CRN 4687-94-9
 CMF C27 H32 O8

measure unrealizable while the DMA tan δ peak is broad and weak. At the difference of these two thermal anal. techniques, TSDC gives an observable signal and a T_{α} temperature close to the glass transition temperature

region. The bad sample preparation reproducibility observed was attributed to the

high conversion rate.

CC 37-3 (Plastics Manufacture and Processing)

ST polymn photochem dimethacrylate **oligomer**; photopolymn dimethacrylate **oligomer**; thermal polymn dimethacrylate **oligomer**

IT **Polymerization**

(photopolymn.; study of **photo-** and thermo-initiated **polymerization** of **oligomeric** ethoxylated bisphenol A dimethacrylates by three thermal anal. techniques)

IT Glass transition temperature

(study of **photo-** and thermo-initiated **polymerization** of **oligomeric** ethoxylated bisphenol A dimethacrylates by three thermal anal. techniques)

IT **Polymerization**

(thermal; study of **photo-** and thermo-initiated **polymerization** of **oligomeric** ethoxylated bisphenol A dimethacrylates by three thermal anal. techniques)

IT 7473-98-5

RL: CAT (Catalyst use); USES (Uses)

(**photo**initiator; study of **photo-** and thermo-initiated **polymerization** of **oligomeric** ethoxylated bisphenol A dimethacrylates by three thermal anal. techniques)

IT 3006-82-4, tert-Butyl-ethyl-2-perhexanoate

RL: CAT (Catalyst use); USES (Uses)

(**polymerization** catalyst; study of **photo-** and thermo-initiated **polymerization** of **oligomeric** ethoxylated bisphenol A dimethacrylates by three thermal anal. techniques)

IT **64696-13-5P**, Ethoxylated bisphenol A dimethacrylate homopolymer

RL: SPN (Synthetic preparation); PREP (Preparation)

(study of **photo-** and thermo-initiated **polymerization** of **oligomeric** ethoxylated bisphenol A dimethacrylates by three thermal anal. techniques)

IT **64696-13-5P**, Ethoxylated bisphenol A dimethacrylate homopolymer

RL: SPN (Synthetic preparation); PREP (Preparation)

(study of **photo-** and thermo-initiated **polymerization** of **oligomeric** ethoxylated bisphenol A dimethacrylates by three thermal anal. techniques)

RN 64696-13-5 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α, α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -(2-methyl-1-oxo-2-propenyl)oxy]-, homopolymer (9CI)
(CA INDEX NAME)

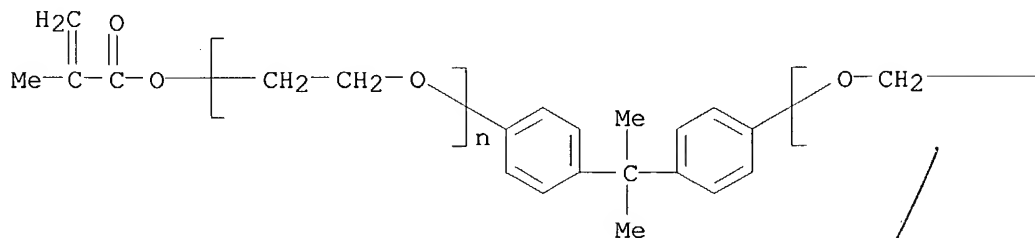
CM 1

CRN 41637-38-1

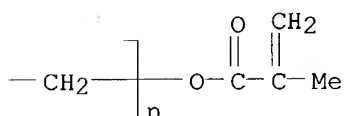
CMF (C2 H4 O)_n (C2 H4 O)_n C23 H24 O4

CCI PMS

PAGE 1-A



PAGE 1-B



RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 28 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:747057 HCAPLUS

DN 133:322729

TI Radically polymerizable polymer composition for flexible light-scattering film showing light incident angle selectivity

IN Ohe, Yasushi; Kume, Makoto

PA Toppan Printing Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000297139	A2	20001024	JP 1999-108577	19990415
PRAI	JP 1999-108577		19990415		
OS	MARPAT 133:322729				

AB The composition contains compds. having ≥ 1 oxirane ring, radically **polymerizable** compds., and **photopolymn.** **initiators** generating cations and radicals under chemical beam irradiation and the above 2 kinds of monomers have different n. The light-scattering film, suitable for liquid crystal display devices, etc., involves areas with different n, which are distributed in irregular shapes and in ununiform thickness so that a pattern made of gradation of n, corresponding to the difference of n, is formed in the film. The areas are distributed to make layers inclined against the film thickness direction so that an incident light along the slope of the inclined layers is scattered from the film and an incident light perpendicular to the slope is transmitted through the film. Thus, a mixture of bisphenol A epoxy resin (Epikote 1004) 90, 2,2-bis[p-(3-butoxy-2-glycidyloxypropyloxy)phenyl]propane (XB 4122) 10, tripropylene glycol diacrylate (Viscoat 310HP) 50, 4,4'-bis(tert-butylphenyl)iodonium PF6 7.5, 3,3'-carbonylbis(7-diethylaminocoumarine) 0.25, and 2-butanol 100 parts was applied on a glass plate, dried, exposed to Ar laser, UV-irradiated,

and released from the glass plate to give the film without cracking in peeling off from the glass plate. The film showed 79% total light transmittance for light with incident angle 0° and 20% for the angle 40° .

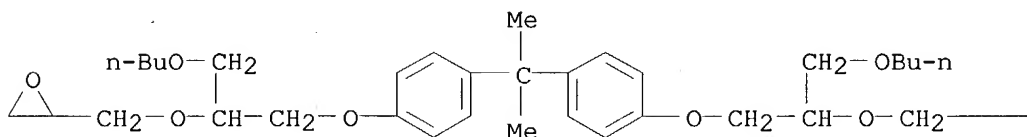
IC C08G059-22
ICS C08F002-46; G02B005-02; C08J005-18
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 73, 74
IT 61358-25-6
RL: CAT (Catalyst use); USES (Uses)
 (photopolymn. initiators; in radically
 polymerizable epoxy resin composition for flexible light-scattering
 film showing light incident angle selectivity)
IT 28628-65-1P, Neopentyl glycol diacrylate homopolymer 67939-58-6P
85922-82-3P, Tripropylene glycol diacrylate homopolymer 300699-65-4P
302910-77-6P 302910-78-7P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
(Properties); TEM (Technical or engineered material use); PREP
(Preparation); USES (Uses)
 (radically polymerizable epoxy resin composition for flexible
 light-scattering film showing light incident angle selectivity)
IT **302910-77-6P 302910-78-7P**
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
(Properties); TEM (Technical or engineered material use); PREP
(Preparation); USES (Uses)
 (radically polymerizable epoxy resin composition for flexible
 light-scattering film showing light incident angle selectivity)
RN 302910-77-6 HCAPLUS
CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane
and 2,2'-[(1-methylethylidene)bis[4,1-phenyleneoxy[1-(butoxymethyl)-2,1-
ethanediyl]oxymethylene]]bis[oxirane] (9CI) (CA INDEX NAME)

CM 1

CRN 71033-08-4

CMF C35 H52 O8

PAGE 1-A



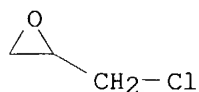
PAGE 1-B



CM 2

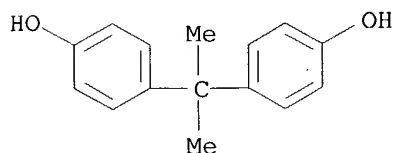
CRN 106-89-8

CMF C3 H5 Cl O



CM 3

CRN 80-05-7
CMF C15 H16 O2

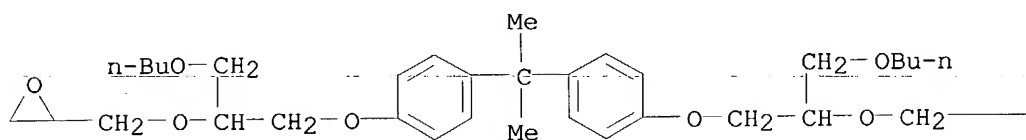


RN 302910-78-7 HCAPLUS
CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[cyclohexanol] and 2,2'-[(1-methylethylidene)bis[4,1-phenyleneoxy[1-(butoxymethyl)-2,1-ethanediyl]oxymethylene]]bis[oxirane] (9CI) (CA INDEX NAME)

CM 1

CRN 71033-08-4
CMF C35 H52 O8

PAGE 1-A

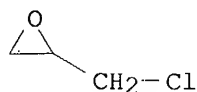


PAGE 1-B



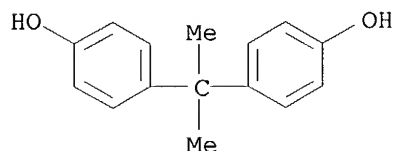
CM 2

CRN 106-89-8
CMF C3 H5 Cl O



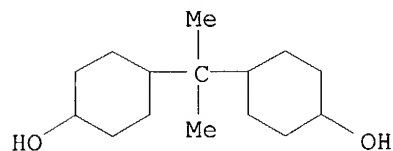
CM 3

CRN 80-05-7
CMF C15 H16 O2



CM 4

CRN 80-04-6
CMF C15 H28 O2



L48 ANSWER 29 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:715614 HCAPLUS

DN 133:267816

TI Photocurable compositions and manufacture of moldings therefrom with excellent surface precision

IN Kawamura, Takayuki; Miyazaki, Ken; Liu, Chunglan

PA Nikon Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000281706	A2	20001010	JP 1999-86180	19990329
PRAI	JP 1999-86180		19990329		
OS	MARPAT 133:267816				

AB The compns., useful for eyeglass lenses, contain radically polymerizable monomers, benzoyl radical generators, and heat-sensitive radical polymerization initiators. Thus, a 80:20 2,2-Bis[4-(methacryloxydiethoxy)phenyl]propane-glycidyl methacrylate mixture was polymerized in the presence of (2,4,6-Trimethylbenzoyl)diphenylphosphine oxide and tert-Bu peroxy-2-ethylhexanoate in a glass mold, irradiated with a metal halide lamp (through a metal-deposited quartz filter), heated at 70° for

30 min and 120° for 30 min, and annealed to give a test piece showing good color uniformity.

IC ICM C08F002-48
ICS B29C039-02; C08F002-00; C08J005-00; G02B001-04; B29K101-10; B29L011-00; C08L033-04

CC 38-2 (Plastics Fabrication and Uses)
Section cross-reference(s): 73

IT **189686-22-4P**, 2,2-Bis[4-(methacryloxydiethoxy)phenyl]propane-glycidyl methacrylate copolymer
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (photocurable comps. for moldings with good surface precision and color uniformity)

IT 109-13-7 3006-82-4, tert-Butyl peroxy-2-ethylhexanoate
RL: CAT (Catalyst use); USES (Uses) (radical **polymerization initiator**; photocurable comps. for moldings with good surface precision and color uniformity)

IT **189686-22-4P**, 2,2-Bis[4-(methacryloxydiethoxy)phenyl]propane-glycidyl methacrylate copolymer
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (photocurable comps. for moldings with good surface precision and color uniformity)

RN 189686-22-4 HCAPLUS

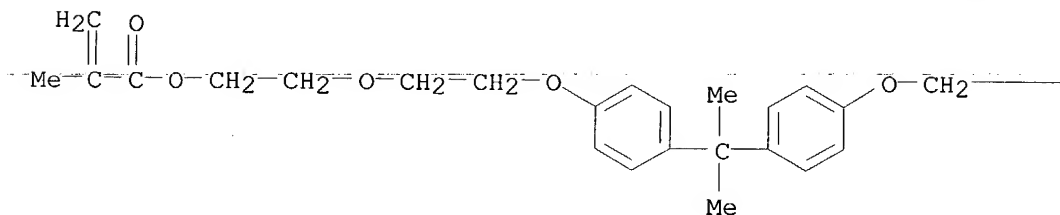
CN 2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) ester, polymer with oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

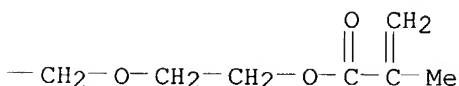
CRN 56744-60-6

CMF C31 H40 O8

PAGE 1-A



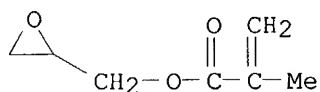
PAGE 1-B



CM 2

CRN 106-91-2

CMF C7 H10 O3



L48 ANSWER 30 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:635088 HCAPLUS

DN 133:223956

TI Photocurable adhesives containing 2-methyl-1-[4-(methylthio)phenyl]-2-morpholinopropan-1-one for lamination of optical disks

IN Iida, Takafumi

PA Nagase Chiba K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000248233	A2	20000912	JP 1999-53026	19990301
	US 6326414	B1	20011204	US 2000-515522	20000229
PRAI	JP 1999-53026	A	19990301		
OS	MARPAT 133:223956				

AB The adhesives comprise radically **polymerizable** vinyl compds., α -hydroxyalkylphenone-type **photopolymn. initiators**, and 2-methyl-1-[4-(methylthio)phenyl]-2-morpholinopropan-1-one (I). Thus, a composition of KRM 7595 (urethane acrylate **oligomer**) 50, Kayarad R 551 [bis(4-acryloxypolyethoxyphenyl)propane] 15, Viscoat 335HP (tetraethylene glycol diacrylate) 35, Irgacure 184 (1-hydroxycyclohexyl Ph ketone) 5, and Irgacure 907 (I) 2 parts was applied on a degreased polycarbonate, laminated with an Al-clad polycarbonate substrate, photocured, and humidified in 85°/RH 85% atmospheric to show distortion <0.4° in radial direction with no apparent deterioration of adhesive layer.

IC ICM C09J004-00

ICS C09J004-02; C09J011-06; C09J175-16; G11B007-24; C08F290-06

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 74

IT 291276-07-8P 291276-08-9P 291276-09-0P

291276-10-3P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(photocurable adhesives containing methylmethylthiophenylmorpholinopropanone for lamination of optical disks)

IT 291276-07-8P 291276-09-0P 291276-10-3P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(photocurable adhesives containing methylmethylthiophenylmorpholinopropanone for lamination of optical disks)

RN 291276-07-8 HCAPLUS

CN 2-Propenoic acid, oxybis(2,1-ethanediylxy-2,1-ethanediyl) ester, polymer with KRM 7595 and α, α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

CM 1

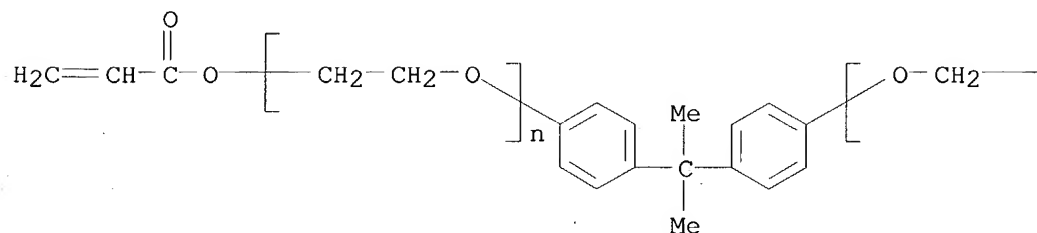
CRN 255719-64-3
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

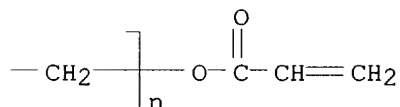
CM 2

CRN 64401-02-1
CMF (C2 H4 O)n (C2 H4 O)n C21 H20 O4
CCI PMS

PAGE 1-A



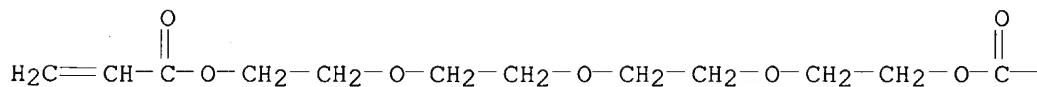
PAGE 1-B



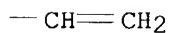
CM 3

CRN 17831-71-9
CMF C14 H22 O7

PAGE 1-A



PAGE 1-B



RN 291276-09-0 HCAPLUS
CN 2-Propenoic acid, oxybis(2,1-ethanediylloxy-2,1-ethanediyl) ester, polymer
with cyclohexyl 2-propenoate, KRM 7595 and α,α' -[(1-

methylethylidene)di-4,1-phenylene]bis[ω-[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

CM 1

CRN 255719-64-3

CMF Unspecified

CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

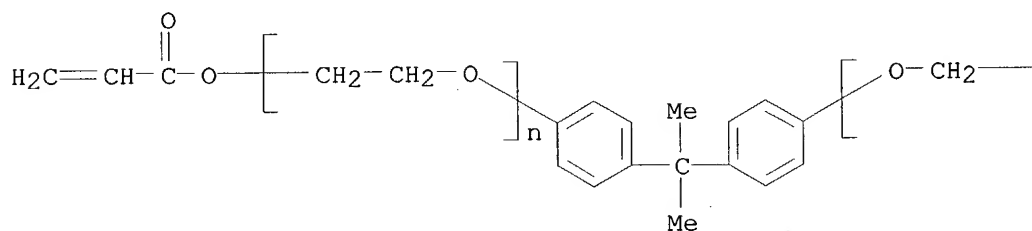
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CRN 64401-02-1

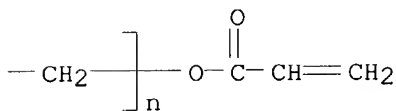
CMF (C2 H4 O)n (C2 H4 O)n C21 H20 O4

CCI PMS

PAGE 1-A



PAGE 1-B

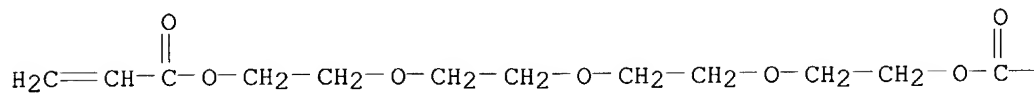


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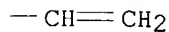
CRN 17831-71-9

CMF C14 H22 O7

PAGE 1-A



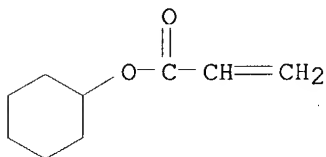
PAGE 1-B



CM 4

CRN 3066-71-5

CMF C9 H14 O2



RN 291276-10-3 HCAPLUS

CN 2-Propenoic acid, 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with cyclohexyl 2-propenoate, KRM 7595, α, α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] and oxybis(2,1-ethanediyl) di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 255719-64-3

CMF Unspecified

CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

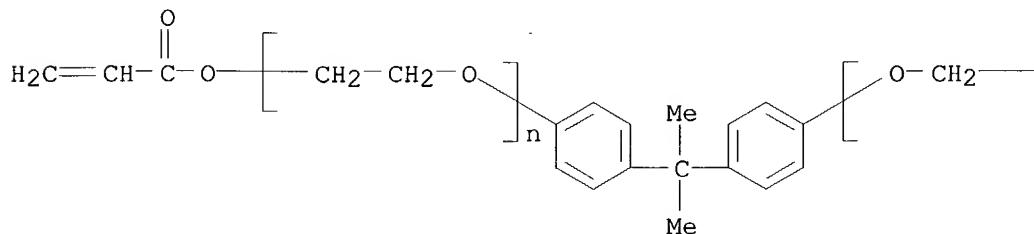
CM 2

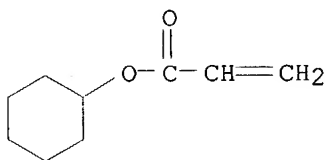
CRN 64401-02-1

CMF (C2 H4 O)_n (C2 H4 O)_n C21 H20 O4

CCI PMS

PAGE 1-A





L48 ANSWER 31 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:631910 HCAPLUS

DN 133:209338

TI Photopolymerization initiators, photocurable resin compositions, moldings coated with the compositions, and method for yellowing prevention

IN Fujita, Makoto

PA Sumitomo Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000248012	A2	20000912	JP 1999-50314	19990226
PRAI	JP 1999-50314		19990226		

AB The initiators comprise hydroxy(lower alkyl)phenones and 1,1-di(lower alkoxy)-1,2-diphenylethanes. The compns. are useful for coatings for digital versatile disks, compact disks, etc. A composition comprising bisphenol A diglycidyl ether diacrylate 10, polyethylene glycol diacrylate 10, neopentyl glycol hydroxypivalic acid diacrylate 70, ethylene oxide-modified phosphoric acid dimethacrylate 0.2, Irgacure 184 10, and Irgacure 651 1.5 parts were applied on a polycarbonate optical disk substrate and cured by UV irradiation to give a coating showing yellowing index <3.0 and no stickiness.

IC ICM C08F002-50

ICS C08F020-10; C08F290-00; C08J007-04; C09D004-00

CC 42-3 (Coatings, Inks, and Related Products)

Section cross-reference(s): 35, 38, 67, 74

IT **Polymerization catalysts**

(**photopolymn.**, hydroxyalkylphenones and dialkoxydiphenylethanes; **photopolymn. initiators** for photocurable coatings with reduced yellowing for optical disks)

IT 115055-18-0

RL: CAT (Catalyst use); USES (Uses)

(**oligomeric**, photopolymn. initiators; photopolymn. initiators for photocurable coatings with reduced yellowing for optical disks)

IT **290832-67-6P**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(photopolymn. initiators for photocurable coatings with reduced yellowing for optical disks)

IT **290832-67-6P**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(photopolymn. initiators for photocurable coatings with reduced yellowing for optical disks)

RN 290832-67-6 HCAPLUS

CN 2-Propenoic acid, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-

propanediyl]] ester, polymer with 3-[2,2-dimethyl-1-oxo-3-[(1-oxo-2-propenyl)oxy]propoxy]-2,2-dimethylpropyl 2-propenoate, α -(1-oxo-2-propenyl)- ω -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) and α, α' -phosphinicobis[ω -[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

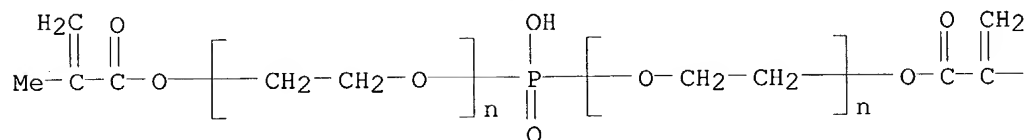
CM 1

CRN 72829-36-8

CMF (C2 H4 O)_n (C2 H4 O)_n C8 H11 O6 P

CCI PMS

PAGE 1-A



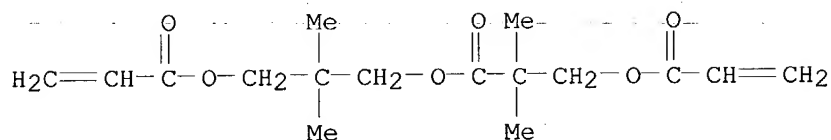
PAGE 1-B

— Me

CM 2

CRN 30145-51-8

CMF C16 H24 O6

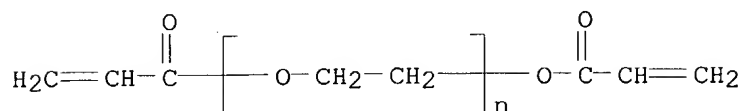


CM 3

CRN 26570-48-9

CMF (C2 H4 O)_n C6 H6 O3

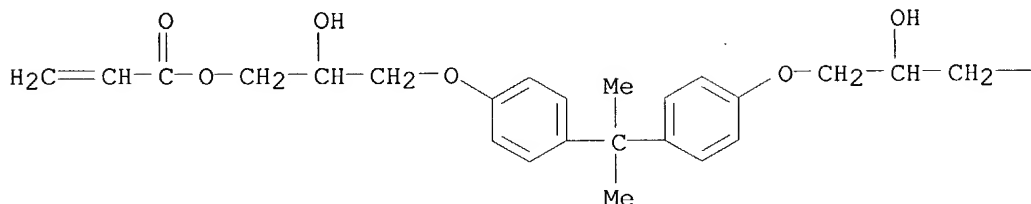
CCI PMS



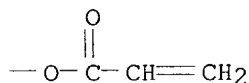
CM 4

CRN 4687-94-9
CMF C27 H32 O8

PAGE 1-A



PAGE 1-B



L48 ANSWER 32 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2000:579973 HCAPLUS
 DN 133:164497
 TI Manufacture of photochromic polymer cured bodies
 IN Komuro, Kiyoko; Momota, Junji
 PA Tokuyama Corp., Japan
 SO Jpn. Kokai Tokkyo Koho, 10 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

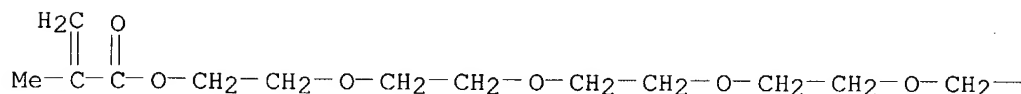
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000230009	A2	20000822	JP 1999-36035	19990215
PRAI	JP 1999-36035		19990215		

AB The process involves irradiating activated energy beam with main spectrum in ≥ 400 nm then heating of polymerizable compns. containing (a) radically polymerizable monomers, (b) UV polymerization initiators having main absorption in UV area and molar absorption coefficient to 400-nm light ≥ 1500 L/mol-cm, (c) thermal **polymerization initiators**, and (d) **photochromic** compds. Thus, a composition comprised 2,2-bis(4-methacryloyloxyethoxyphenyl)propane 38, 2,2-bis(4-methacryloyloxypentaethoxyphenyl)propane 38, glycidyl methacrylate 5, isobornyl acrylate 15, α -methylstyrene 3, α -methylstyrene dimer 1, N-cyanomethyl-6,7-dihydro-2-(p-methoxyphenyl)-4-methylspiro(5,6-benzo[b]thiophenedicarboximido-7,2-tricyclo(3.3.1.1^{3,7})decane) 0.05, tert-Bu peroxyisobutyrate 0.5, and Irgacure CGI 1700 0.5 part. It was cast in a mold, exposed to an active energy beam, and heated at 60-110° to give transparent test pieces having Rockwell hardness 96, λ_{max} 580 nm, absorption 0.8, and forming blue color.

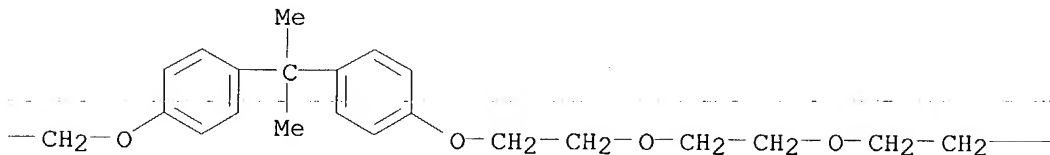
IC ICM C08F002-48
 ICS C08F002-44; C08F290-06; C09K009-00
 CC 35-4 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 38, 73
 IT **288150-19-6P** 288150-20-9P
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (manufacture of photochromic polymer cured bodies)
 IT **288150-19-6P**
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (manufacture of photochromic polymer cured bodies)
 RN 288150-19-6 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) ester, polymer with (1-methylethenyl)benzene, (1-methylethylidene)bis(4,1-phenyleneoxy-3,6,9,12-tetraoxatetradecane-14,1-diyl) bis(2-methyl-2-propenoate), oxiranylmethyl 2-methyl-2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI)
 (CA INDEX NAME)
 CM 1
 CRN 56792-06-4
 CMF C43 H64 O14

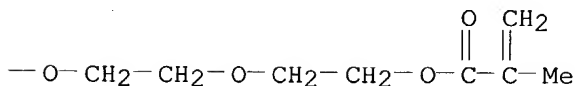
PAGE 1-A



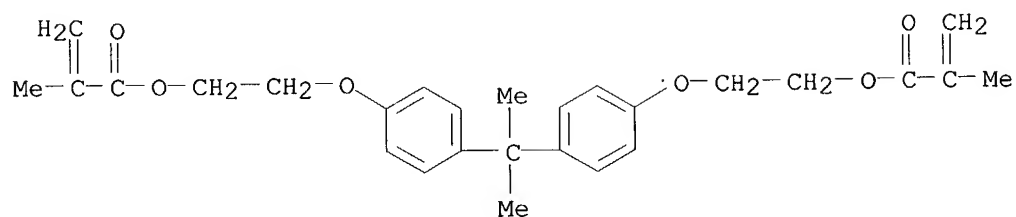
PAGE 1-B



PAGE 1-C



CM 2
 CRN 24448-20-2
 CMF C27 H32 O6

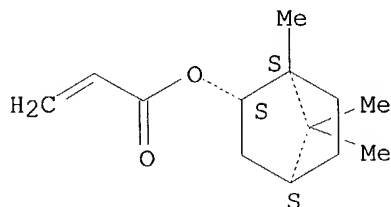


CM 3

CRN 5888-33-5

CMF C13 H20 O2

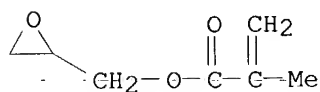
Relative stereochemistry.



CM 4

CRN 106-91-2

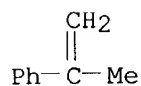
CMF C7 H10 O3



CM 5

CRN 98-83-9

CMF C9 H10



L48 ANSWER 33 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:440193 HCAPLUS

DN 133:81408

TI Photosensitive optical **waveguide** components and manufacture of optical **waveguides**

IN Toyota, Seiji; Imamura, Saburo; Tomaru, Akira; Kurihara, Takashi; Enbutsu,

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

Akitsugu; Hayashida, Shunichi; Maruno, Toru
 PA Nippon Telegraph and Telephone Corp., Japan
 SO Jpn. Kokai Tokkyo Koho, 23 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000180643	A2	20000630	JP 1999-284886	19991005
	JP 3133039	B2	20010205		
	US 6537723	B1	20030325	US 1999-409078	19990930
	US 2003148228	A1	20030807	US 2002-262777	20021002
PRAI	JP 1998-283142	A	19981005		
	US 1999-409078	A3	19990930		
GI					

applicant.

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The components comprise organic **oligomers** I, II and III (X, X1,2 = H, D, halo, alkyl, alkoxy; m = 1-5; R1 = Me, Et, isopropyl; R2 = Ol/2, Me, Et, isopropyl; R3 = Ol/2, O(CH2)2OCH:CHCH3; Z = oxirane, bicyclo[4.1.0]heptane; R4,5 = H, halo, alkyl, alkoxy, trifluoromethyl; X3,4 = alkylene, alkyleneoxy, oxyalkylene. aromatic ring).

IC ICM G02B006-12
 ICS C08L083-04; G02B006-13; G03F007-075

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

ST optical **waveguide** photosensitive silicone **oligomer** manuf

IT Optical **waveguides**
 (photosensitive optical **waveguide** components and manufacture of optical **waveguides**)

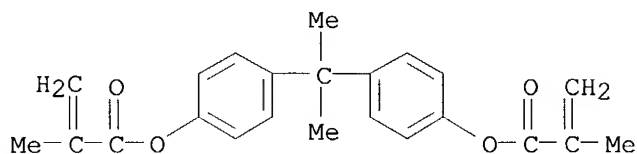
IT **Oligomers**
 Polysiloxanes, uses
 RL: DEV (Device component use); USES (Uses)
 (photosensitive optical **waveguide** components and manufacture of optical **waveguides**)

IT **3253-39-2** 220341-25-3
 RL: DEV (Device component use); USES (Uses)
 (photosensitive optical **waveguide** components and manufacture of optical **waveguides**)

IT **3253-39-2**
 RL: DEV (Device component use); USES (Uses)
 (photosensitive optical **waveguide** components and manufacture of optical **waveguides**)

RN 3253-39-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, (1-methylethylidene)di-4,1-phenylene ester (9CI) (CA INDEX NAME)



L48 ANSWER 34 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:420214 HCAPLUS

DN 133:151493

TI Anisotropic photo-polymerization and fluorescence study of discotic materials

AU Sonpatki, Milind M.; Sergan, Tatiana; Kelly, Jack; Chien, L. C.

CS Liquid Crystal Institute, Chemical Physics Interdisciplinary Programs and NSF ALCOM Center, Kent State University, Kent, OH, 44242, USA

SO Macromolecular Symposia (2000), 154 (Polymers in Display Applications), 83-93

CODEN: MSYMEC; ISSN: 1022-1360

PB Wiley-VCH Verlag GmbH

DT Journal

LA English

AB The discotic films were prepared by coating the solution of liquid crystalline discotic monomer and initiator onto rubbed polyimide as alignment substrate. Liquid crystalline orientation in films was frozen-in by photo-polymerization (UV light) in nematic melt. Thickness and chemical constituents of polyimide was varied so as to obtain planar or homeotropic alignment. Photo-polymerization was studied with respect to isothermal DSC,

PM, high temperature IR and solubility behavior of polymerized films. Further, the alignment

of discotic films was studied by polarized fluorescence. Order parameter values were compared for planar, homeotropic and for films without any alignment substrate. Higher values were obtained for planar films formed on polyimide layer than formed solely on glass surface.

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 35, 73, 75

IT 260444-34-6

RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (anisotropic photopolymn. and fluorescence study of discotic polymeric films)

IT 32760-80-8, Irgacure 261

RL: MOA (Modifier or additive use); USES (Uses) (photoinitiator; anisotropic photopolymn. and fluorescence study of discotic polymeric films)

IT 260444-34-6

RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (anisotropic photopolymn. and fluorescence study of discotic polymeric films)

RN 260444-34-6 HCAPLUS

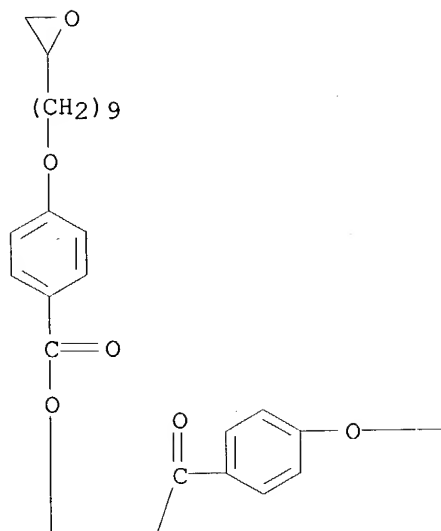
CN Benzoic acid, 4-[(9-oxiranylnonyl)oxy]-, 2,3,6,7,10,11-triphenylenehexayl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

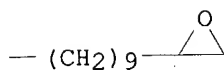
CRN 260444-33-5

CMF C126 H156 O24

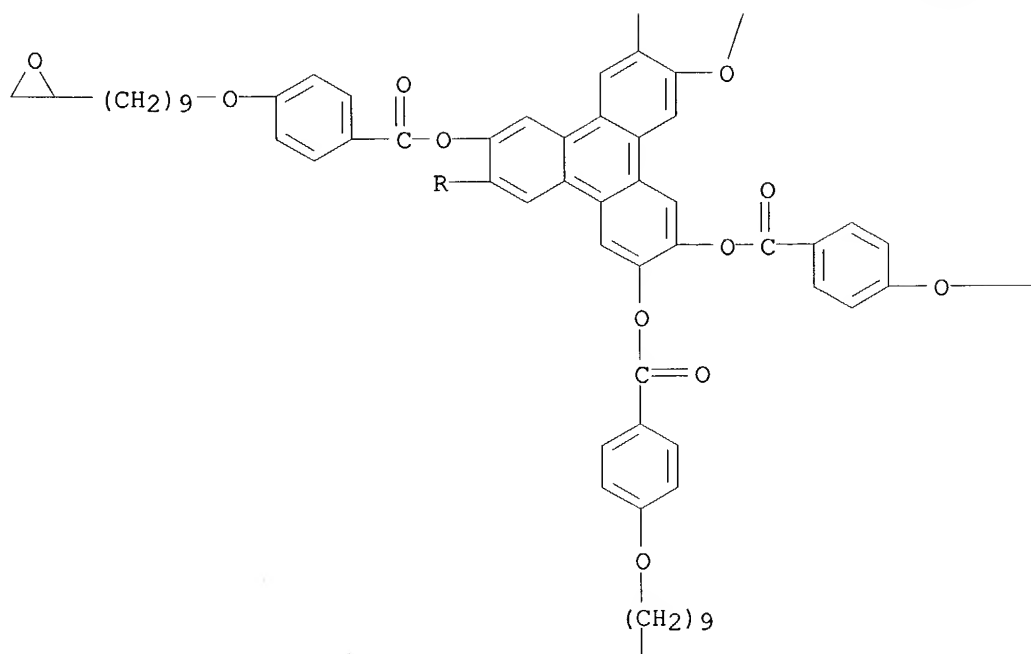
PAGE 1-A



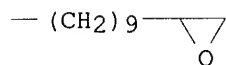
PAGE 1-B



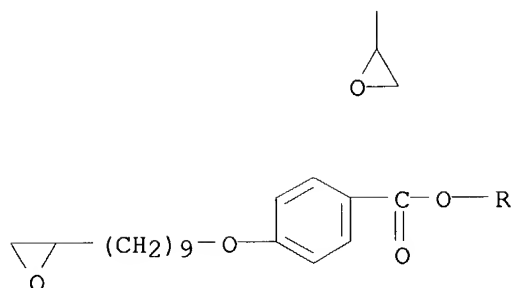
PAGE 2-A



PAGE 2-B



PAGE 3-A



RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 35 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1999:498641 HCAPLUS

DN 131:177356

TI **Photosensitive resin composition and photosensitive film** using same

IN Tsuchiya, Katsunori; Yoshida, Tetsuya

PA Hitachi Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

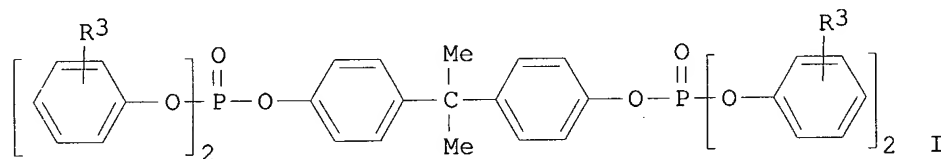
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11218912	A2	19990810	JP 1998-19416	19980130
PRAI	JP 1998-19416		19980130		
OS	MARPAT 131:177356				
GI					



AB The title resin composition contains (a) a binder polymer comprising (meth)acrylic acid and its alkyl esters as monomer units, (b) an urethane unsatd. organooligomer containing repeating units O(CH₂)₆OCO and O(CH₂)₅OCO in a molar ratio of 9-1:1-9 in which an unsatd. organoxycarbonylimide group links to the termini of an urethane **oligomer** (number average mol. weight 1000-10,000) comprising a OH-terminated copolycarbonate (number average mol. weight

600- 1000) and organic isocyanate which link each other in a chain form, (c) an ethylenic unsatd. group-containing polymerizing compound p-CH₂:CR₁CO(OCH₂CH₂)_mOC₆H₄CMe₂C₆H₄O(CH₂CH₂O)_nCOCR₂:CH₂-p (R₁, R₂ = H, Me; m + n = 8-12), (d) a **photopolymn. initiator**, and (e) a P compound I (R₃ = C1-3 alkyl). A photosensitive film is also claimed, comprising a film support laminated with a **photosensitive** layer made of the **composition**. The composition provides a high resolution pattern for a flexible printed circuit board and shows good thermal resistance to soft solder, and fire-proofing properties.

IC ICM G03F007-027

ICS C08K005-521; C08L033-00; C08L075-04; G03F007-004

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38, 76

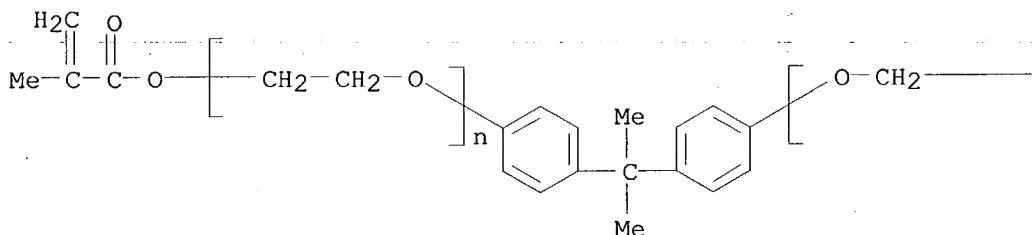
ST photoresist flexible printed circuit board; acrylic copolymer photoresist; polyurethane polycarbonate **oligomer** photoresist; diacrylic compd photoresist; phosphorous compd photoresist

IT Printed circuit boards

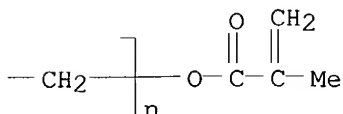
(flexible; photoresist cong. acrylic polymer, urethane **oligomer**

, diacrylic compound, and phosphorus compound)
 IT Photoresists
 (photoresist cong. acrylic polymer, urethane **oligomer**,
 diacrylic compound, and phosphorus compound)
 IT Polyurethanes, uses
 Polyurethanes, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (polycarbonate-; photoresist cong. acrylic polymer, urethane
oligomer, diacrylic compound, and phosphorus compound)
 IT Polycarbonates, uses
 Polycarbonates, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (polyurethane-; photoresist cong. acrylic polymer, urethane
oligomer, diacrylic compound, and phosphorus compound)
 IT **41637-38-1**, BPE 500 93981-32-9
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material
 use); USES (Uses)
 (photoresist cong. acrylic polymer, urethane **oligomer**,
 diacrylic compound, and phosphorus compound)
 IT 25035-69-2, Butyl acrylate-methacrylic acid-methyl methacrylate copolymer
 153192-14-4, UF 8003
 RL: TEM (Technical or engineered material use); USES (Uses)
 (photoresist cong. acrylic polymer, urethane **oligomer**,
 diacrylic compound, and phosphorus compound)
 IT **41637-38-1**, BPE 500
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material
 use); USES (Uses)
 (photoresist cong. acrylic polymer, urethane **oligomer**,
 diacrylic compound, and phosphorus compound)
 RN 41637-38-1 HCAPLUS
 CN Poly(oxy-1,2-ethanediyl), α, α' -[(1-methylethylidene)di-4,1-
 phenylene]bis[ω -(2-methyl-1-oxo-2-propenyl)oxy]- (9CI) (CA INDEX
 NAME)

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PAGE 1-B

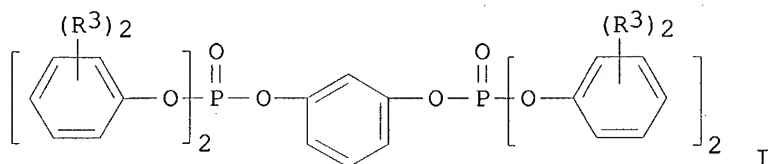


L48 ANSWER 36 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1999:498640 HCAPLUS

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

DN 131:177355
 TI **Photosensitive resin composition** and
photosensitive film using same
 IN Tsuchiya, Katsunori; Yoshida, Tetsuya; Nakano, Akio; Sasahara, Naoki
 PA Hitachi Chemical Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11218911	A2	19990810	JP 1998-19415	19980130
PRAI	JP 1998-19415		19980130		
OS	MARPAT 131:177355				
GI					



AB The title resin composition contains (a) a binder polymer comprising (meth)acrylic acid and its alkyl esters as monomer units, (b) an urethane unsatd. organo-**oligomer** containing repeating units O(CH₂)₆OCO and O(CH₂)₅OCO in a molar ratio of 9-1:1-9 in which an unsatd. organo-oxy-carbonylimide group links to the termini of an urethane **oligomer** (number average mol. weight 1000-10,000) comprising a OH-terminated copolycarbonate (number average mol. weight 600- 1000) and organic isocyanate which

link each other in a chain form, (c) an ethylenic unsatd. group-containing polymerizing compound p-CH₂:CR₁CO(OCH₂CH₂)_mOC₆H₄CMe₂C₆H₄O(CH₂CH₂O)_nCOCR₂:CH₂-p (R₁, R₂ = H, Me; m + n = 8-12), (d) a **photopolymer**.

initiator, and (e) a P compound I (R₃ = C₁-3 alkyl). A photosensitive film is also claimed, comprising a film support laminated with a **photosensitive** layer made of the **composition**. The composition provides a high resolution pattern for a flexible printed circuit board showing high flexibility, thermal resistance to soft solder, and fire-proofing properties.

IC ICM G03F007-027

ICS C08K005-521; C08L033-00; C08L075-04

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38, 76

ST photoresist flexible printed circuit board; acrylic polymer photoresist; urethane **oligomer** photoresist; phosphorus compd photoresist

IT Printed circuit boards

(flexible; photoresist cong. acrylic polymer, urethane **oligomer**, diacrylic compound, and phosphorus compound for flexible printed circuit board)

IT Photoresists

(photoresist cong. acrylic polymer, urethane **oligomer**, diacrylic compound, and phosphorus compound)

IT Polyurethanes, uses

Polyurethanes, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (polycarbonate-; photoresist cong. acrylic polymer, urethane
oligomer, diacrylic compound, and phosphorus compound)

IT Polycarbonates, uses
 Polycarbonates, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (polyurethane-; photoresist cong. acrylic polymer, urethane
oligomer, diacrylic compound, and phosphorus compound)

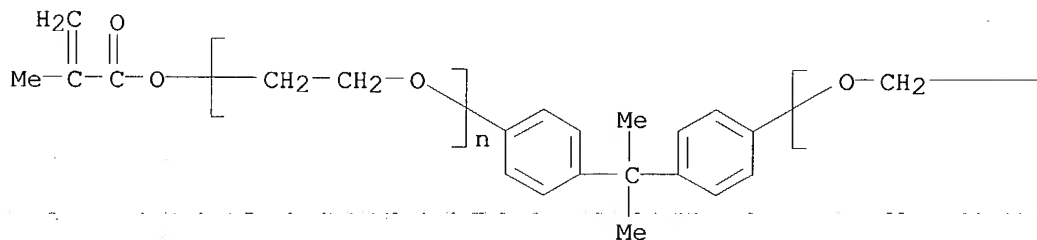
IT 139189-30-3
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material
 use); USES (Uses)
 (photoresist cong. acrylic polymer, urethane **oligomer**,
 diacrylic compound, and phosphorus compound)

IT 25035-69-2, Butyl acrylate-methacrylic acid-methyl methacrylate copolymer
41637-38-1, BPE 500 153192-14-4, UF 8003
 RL: TEM (Technical or engineered material use); USES (Uses)
 (photoresist cong. acrylic polymer, urethane **oligomer**,
 diacrylic compound, and phosphorus compound)

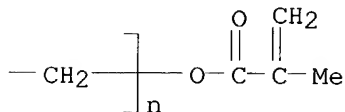
IT **41637-38-1**, BPE 500
 RL: TEM (Technical or engineered material use); USES (Uses)
 (photoresist cong. acrylic polymer, urethane **oligomer**,
 diacrylic compound, and phosphorus compound)

RN 41637-38-1 HCAPLUS
 CN Poly(oxy-1,2-ethanediyl), α, α' -[(1-methylethylidene)di-4,1-
 phenylene]bis[ω -[(2-methyl-1-oxo-2-propenyl)oxy]- (9CI) (CA INDEX
 NAME)

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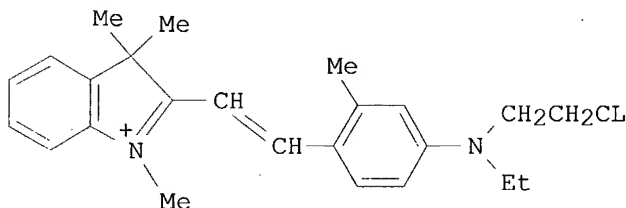
PAGE 1-B



L48 ANSWER 37 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1999:339494 HCAPLUS
 DN 130:353741
 TI Photocurable paint composition for road markings
 IN Nakamura, Kenichi; Kamata, Hirotoshi; Koshikawa, Toshio; Sugita, Suichi
 PA Showa Denko Kabushiki Kaisha, Japan
 SO Eur. Pat. Appl., 24 pp.
 CODEN: EPXXDW

DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 915136	A1	19990512	EP 1998-120941	19981104
	EP 915136	B1	20040121		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 11236517	A2	19990831	JP 1998-297258	19981019
	CA 2253054	AA	19990505	CA 1998-2253054	19981104
	US 6211260	B1	<u>20010403</u>	US 1998-185583	<u>19981104</u>
	AT 258210	E	20040215	AT 1998-120941	19981104
	TW 506997	B	20021021	TW 1998-87118442	19981105
PRAI	JP 1997-303081	A	19971105		
	US 1998-86141P	P	19980520		
OS	MARPAT 130:353741				
GI					



AB A photocurable paint composition for road markings is disclosed, comprising (A) a compound having an ethylenically unsatd. group, (B) a filler, (C) a cationic dye represented by formula (1): D+A- (wherein D+ represents a cation having an absorption maximum wavelength in the wavelength region of from 400 to 1,200 nm, and A- represents an optional anion), (D) a quaternary organic borate-type sensitizer represented by formula (2): R1R2R3R4B-Z+ (wherein R1, R2, R3 and R4 each independently represents an alkyl group, an aryl group, an aralkyl group, an alkenyl group, an alkynyl group, a silyl group, a heterocyclic group or a halogen atom, and Z+ represents an optional cation), (E) an UV radical polymerization initiator capable of generating a radical upon absorption of light at a wavelength of 400 nm or less, and, optionally, (F) glass beads. This composition provides thick coatings that are photocurable in a short time and have good abrasion resistance. A typical composition contained 5:2:1:2 Ripoxy SP-1529 (bisphenol A epoxy resin acrylate)-tripropylene glycol diacrylate-EB754 (70:30 linear acrylic oligomer-1,6-hexanediol diacrylate mixture)-isobornyl acrylate mixture 100, Taipaque CR-58 (rutile) 30, Escalon 100 (CaCO3) 100, GB-402T (glass beads) 100, Aerosil 200 3, 0.7:10.0:30:10:49.3 cationic dye I-tetrabutylammonium butyltri(4-tert-butylphenyl)borate-Irgacure 184 (1-hydroxycyclohexyl Ph ketone)-Lucirin TPO (2,4,6-trimethylbenzoyldiphenylphosphine oxide)-N-methyl-2-pyrrolidone solution 7 parts.

IC ICM C09D005-00
ICS C08F002-50

CC 42-10 (Coatings, Inks, and Related Products)

IT Borates

RL: CAT (Catalyst use); USES (Uses)
(photosensitizer; photocurable paint composition for

road markings)

IT 13048-33-4DP, 1,6-Hexanediol diacrylate, epoxy acrylate polymers
 224628-00-6P 224785-37-9P **224785-38-0P** 224785-39-1P
 224785-40-4P **224785-41-5P**
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or
 engineered material use); PREP (Preparation); USES (Uses)
 (cured paint; photocurable paint composition for road markings)

IT 947-19-3, Irgacure 184 7473-98-5, Darocur 1173 24650-42-8, Irgacure
 651 184649-96-5, Irgacure 1800 189146-15-4, Lucirin TPO
 RL: CAT (Catalyst use); USES (Uses)
 (**photopolymn. initiator**; photocurable paint composition
 for road markings)

IT 120307-06-4, Tetrabutylammonium butyltriphenylborate 189947-86-2,
 Tetrabutylammonium butyltris(4-tert-butylphenyl)borate 219125-19-6
 RL: CAT (Catalyst use); USES (Uses)
 (**photosensitizer**; photocurable paint **composition** for
 road markings)

IT **224785-38-0P 224785-41-5P**
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or
 engineered material use); PREP (Preparation); USES (Uses)
 (cured paint; photocurable paint composition for road markings)

RN 224785-38-0 HCAPLUS
 CN 2-Propenoic acid, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-
 propanediyl)] ester, polymer with Ebecryl 111 and oxybis(2,1-ethanediyl-
 2,1-ethanediyl) di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

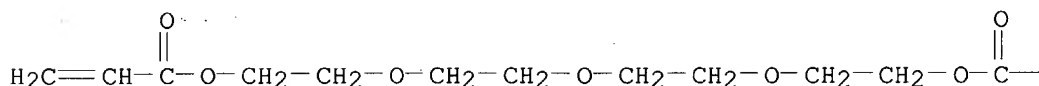
CRN 211629-51-5
 CMF Unspecified
 CCI MAN

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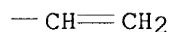
CM 2

CRN 17831-71-9
 CMF C14 H22 O7

PAGE 1-A



PAGE 1-B

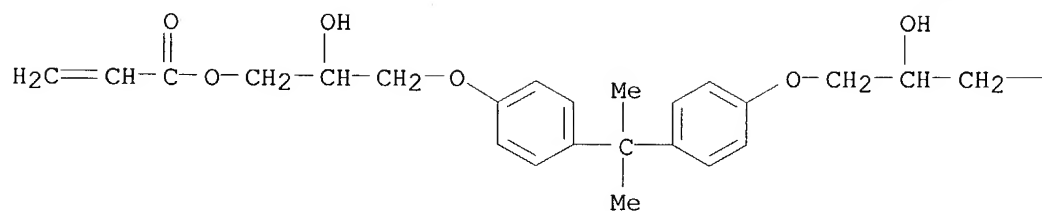


CM 3

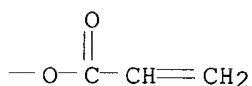
CRN 4687-94-9

CMF C27 H32 O8

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PAGE 1-B



RN 224785-41-5 HCAPLUS
 CN 2-Propenoic acid, 2,2-dimethyl-1,3-propanediyl ester, polymer with
 4-(1,1-dimethylethyl)cyclohexyl 2-propenoate, Ebecryl 754 and
 (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)]
 di-2-propenoate (9CI) (CA INDEX NAME)

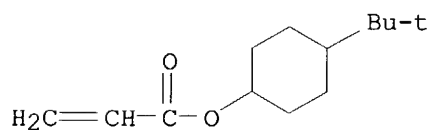
CM 1

CRN 93907-19-8
 CMF Unspecified
 CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

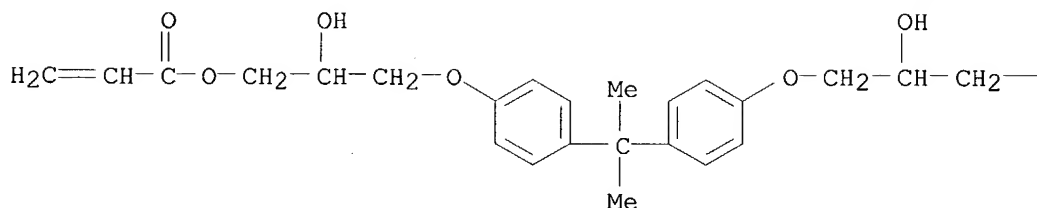
CRN 84100-23=2
 CMF C13 H22 O2



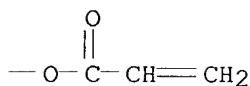
CM 3

CRN 4687-94-9
 CMF C27 H32 O8

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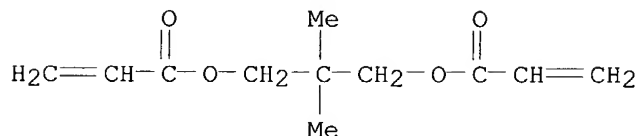


PAGE 1-B



CM 4

CRN 2223-82-7
CMF C11 H16 O4

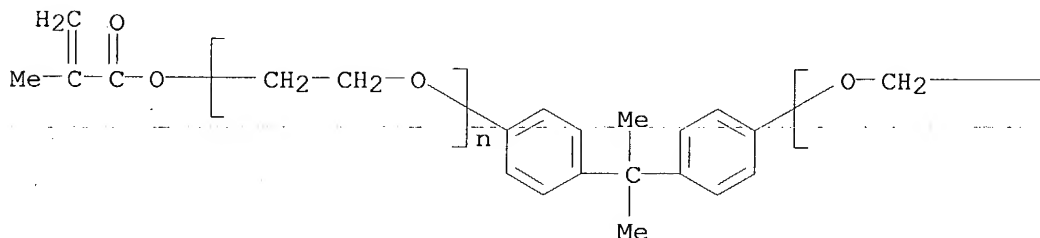


RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

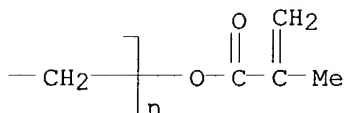
- L48 ANSWER 38 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:271700 HCAPLUS
DN 131:158012
TI Kinetic studies of photoinitiated polymerization of a dimethacrylate
oligomer
AU Lecamp, L.; Youssef, B.; Bunel, C.; Lebaudy, P.
CS Laboratoire de Materiaux Macromoleculaires, Institut National des Sciences
Appliquees de Rouen, Mont Saint Aignan, 76131, Fr.
SO Nuclear Instruments & Methods in Physics Research, Section B: Beam
Interactions with Materials and Atoms (1999), 151(1-4), 285-289
CODEN: NIMBEU; ISSN: 0168-583X
PB Elsevier Science B.V.
DT Journal
LA English
AB The kinetics of photoinitiated polymerization of a dimethacrylate
oligomer with 2,2-dimethyl-2-hydroxyacetophenone (Darocur 1173)
was studied by using isothermal photocalorimetry. First, an autocatalytic
model was used and the influence of the reaction temperature on the m and n
orders of the reaction and on the phenomenol. rate constant k was
investigated. Then, a mechanistic model was applied to calculate the kp and
kt rate consts. Their evolution with conversion was studied at
50°C.

CC 35-3 (Chemistry of Synthetic High Polymers)
 ST kinetics photopolymn dimethacrylate **oligomer**;
 dimethylhydroxyacetophenone catalyst photopolymn dimethacrylate
oligomer; isothermal photocalorimetry kinetics photopolymn
 dimethacrylate **oligomer**
 IT Crosslinking kinetics
 (photochem.; kinetics of **photoinitiated**
polymerization of dimethacrylate **oligomer** in presence of
 dimethylhydroxyacetophenone catalyst)
 IT **Polymerization** catalysts
Polymerization kinetics
 (photopolymn.; kinetics of **photoinitiated**
polymerization of dimethacrylate **oligomer** in presence of
 dimethylhydroxyacetophenone catalyst)
 IT 7473-98-5, Darocur 1173
 RL: CAT (Catalyst use); USES (Uses)
 (kinetics of photoinitiated polymerization of dimethacrylate **oligomer**
 in presence of dimethylhydroxyacetophenone catalyst)
 IT **41637-38-1**
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (kinetics of photoinitiated polymerization of dimethacrylate **oligomer**
 in presence of dimethylhydroxyacetophenone catalyst)
 IT **41637-38-1**
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (kinetics of photoinitiated polymerization of dimethacrylate **oligomer**
 in presence of dimethylhydroxyacetophenone catalyst)
 RN 41637-38-1 HCAPLUS
 CN Poly(oxy-1,2-ethanediyl), α, α' -[(1-methylethylidene)di-4,1-
 phenylene]bis[ω -[(2-methyl-1-oxo-2-propenyl)oxy]- (9CI) (CA INDEX
 NAME)

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PAGE 1-B



RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 39 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1999:260858 HCAPLUS
 DN 130:318604

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

TI Fire-resistant **photosensitive** polymer **composition** and **photosensitive** element using it for manufacture of coverlay of flexible printed circuit board

IN Nakano, Akio; Tsuchiya, Katsunori; Yoshida, Tetsuya; Sasahara, Naoki

PA Hitachi Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11109624	A2	19990423	JP 1997-264443	19970929
PRAI	JP 1997-264443		19970929		

AB The composition contains (A) a CO₂H-containing binder polymer obtained from tribromophenyl acrylate, (meth)acrylic acid, and vinyl monomers, (B) a reaction product of a polycarbonate having repeating units pentamethylene carbonate (a) and hexamethylene carbonate (b) at molar ratio a:b 9:1-1:9, isophorone diisocyanate, and hydroxyethyl (meth)acrylate, (C) a photopolymerizable compound CH₂:CR₁C(:O)(OCH₂CH₂)pO-1,4-C₆H₄CMe₂-1,4-C₆H₄O(CH₂CH₂O)qC(:O)CR₂:CH₂ (R₁, R₂ = H, Me; p + q = 5-30), (D) a radical-generating **photopolymn. initiator**, (E) an amino resin, and (F) Sb₂O₃. The **photosensitive** element is obtained from the **composition**. The composition gives a coverlay with good bending, fire, and solder-heat resistance.

IC ICM G03F007-033

ICS G08F002-44; C08F002-48; C08F290-06; G03F007-004; G03F007-027; G03F007-028; H05K003-06; H05K003-28; C09D004-06; C09D005-00; C09D171-00

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 76

ST photosensitive solder resist flexible printed circuit; coverlay manuf printed circuit **photosensitive compn**; bromophenyl acrylate solder resist fire resistance; antimony oxide fireproofing agent solder resist

IT Polyurethanes, uses

Polyurethanes, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(acrylic-polycarbonate-, **oligomeric**; fire-resistant **photosensitive composition** for manufacture of coverlay of flexible printed circuit board)

IT Polycarbonates, uses

Polycarbonates, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(acrylic-polyurethane-, **oligomeric**; fire-resistant **photosensitive composition** for manufacture of coverlay of flexible printed circuit board)

IT Fire-resistant materials

Fireproofing agents

Solder resists

(fire-resistant **photosensitive composition** for manufacture of coverlay of flexible printed circuit board)

IT Aminoplasts

RL: MOA (Modifier or additive use); USES (Uses)

(fire-resistant **photosensitive composition** for manufacture of coverlay of flexible printed circuit board)

IT Printed circuit boards

(flexible; fire-resistant **photosensitive composition** for

manufacture of coverlay of flexible printed circuit board)

IT 9003-08-1, Cymel 300
 RL: MOA (Modifier or additive use); USES (Uses)
 (fire-resistant **photosensitive composition** for manufacture of
 coverlay of flexible printed circuit board)

IT 223576-38-3P, 2-Hydroxyethyl methacrylate-methacrylic acid-methyl
 acrylate-methyl methacrylate-tetrahydrofurfuryl methacrylate-
 tribromophenyl acrylate copolymer
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (fire-resistant **photosensitive composition** for manufacture of
 coverlay of flexible printed circuit board)

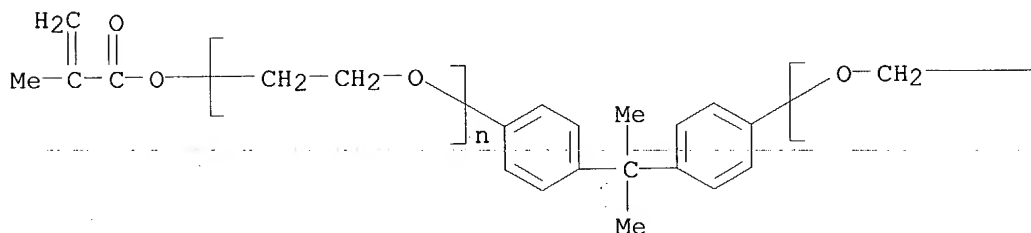
IT 41637-38-1, BPE 500 153192-14-4, UF 8003
 RL: TEM (Technical or engineered material use); USES (Uses)
 (fire-resistant **photosensitive composition** for manufacture of
 coverlay of flexible printed circuit board)

IT 1309-64-4, Antimony trioxide, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (fireproofing agents; fire-resistant **photosensitive
 composition** for manufacture of coverlay of flexible printed circuit
 board)

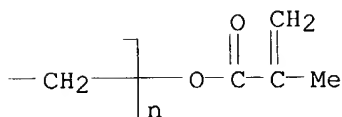
IT 41637-38-1, BPE 500
 RL: TEM (Technical or engineered material use); USES (Uses)
 (fire-resistant **photosensitive composition** for manufacture of
 coverlay of flexible printed circuit board)

RN 41637-38-1 HCAPLUS
 CN Poly(oxy-1,2-ethanediyl), α, α' -[(1-methylethylidene)di-4,1-
 phenylene]bis[ω -[(2-methyl-1-oxo-2-propenyl)oxy]- (9CI) (CA INDEX
 NAME)

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PAGE 1-B

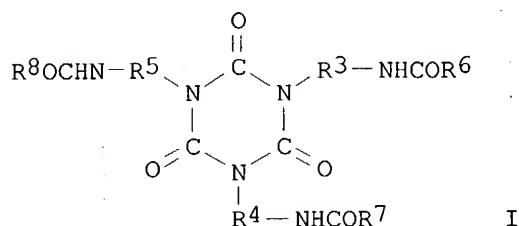


L48 ANSWER 40 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1999:260856 HCAPLUS
 DN 130:304053
 TI **Photosensitive polymer composition** and
photosensitive film using it for manufacture of coverlay of
 flexible printed circuit board

IN Tsuchiya, Katsunori; Nakano, Akio; Yoshida, Tetsuya; Sasahara, Naoki
 PA Hitachi Chemical Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11109622	A2	19990423	JP 1997-264442	19970929
PRAI	JP 1997-264442		19970929		
GI					



AB The composition contains (A) a binder polymer obtained from (meth)acrylic acid and their alkyl esters, (B) an urethane unsatd. organooligomer obtained by treating OH-terminated polycarbonate diols having repeating units CO₂(CH₂)₆O and CO₂(CH₂)₅O at molar ratio 9/1-1/9 with an organic diisocyanate and then introducing an unsatd. organooxycarbonylimide group into the terminal of the resulting urethane **oligomer**, (C) an ethylenically unsatd. group-containing polymerizable compound CH₂:CR¹C(:O)(OCH₂CH₂)_pO-1,4-C₆H₄CMe₂-1,4-C₆H₄O(CH₂CH₂O)_qC(:O)CR²:CH₂ (R¹, R² = H, Me; p + q = 8-12), (D) a **photopolymer. initiator**, and (E) a block isocyanate I [R³-R⁵ = (substituted) alkylene, alkylene oxide, (substituted) arylene; R⁶-R⁸ = residue in reaction of NCO and active H-containing compound]. The **photosensitive** film is obtained from the **composition**. The composition gives a coverlay with good bending and solder-heat resistance.

IC ICM G03F007-027

ICS G03F007-004; G03F007-033; H05K003-06; H05K003-28

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 76

ST photosensitive solder resist flexible printed circuit; coverlay manuf printed circuit **photosensitive compn**; acrylic solder resist bending resistance; urethane **oligomer** solder resist printed circuit; block isocyanate solder resist printed circuit

IT Printed circuit boards

(flexible; **photosensitive** polymer **composition** for manufacture of coverlay of flexible printed circuit board)

IT Solder resists

(**photosensitive** polymer **composition** for manufacture of coverlay of flexible printed circuit board)

IT Polyurethanes, uses

Polyurethanes, uses

RL: MOA (Modifier or additive use); USES (Uses)

(polycarbonate-, **oligomeric**; **photosensitive** polymer

composition for manufacture of coverlay of flexible printed circuit

board)

IT Polycarbonates, uses
Polycarbonates, uses
RL: MOA (Modifier or additive use); USES (Uses)
(polyurethane-, **oligomeric**; **photosensitive** polymer
composition for manufacture of coverlay of flexible printed circuit
board)

IT 822-06-0, Hexamethylene diisocyanate 3779-63-3, Sumidur BL 3175
41637-38-1, BPE 10 153192-14-4, UF 8003
RL: MOA (Modifier or additive use); USES (Uses)
(**photosensitive** polymer **composition** for manufacture of
coverlay of flexible printed circuit board)

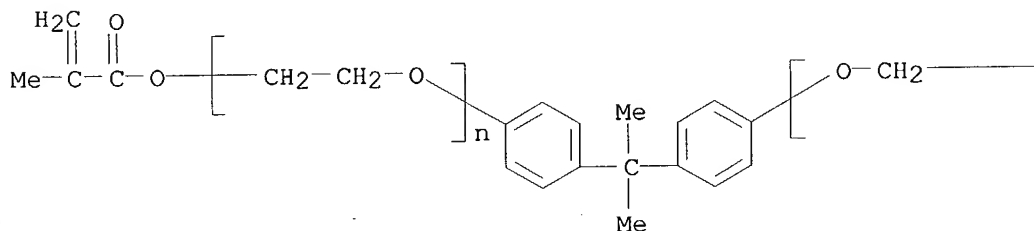
IT 25035-69-2, Butyl acrylate-methacrylic acid-methyl methacrylate copolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(**photosensitive** polymer **composition** for manufacture of
coverlay of flexible printed circuit board)

IT **41637-38-1**, BPE 10
RL: MOA (Modifier or additive use); USES (Uses)
(**photosensitive** polymer **composition** for manufacture of
coverlay of flexible printed circuit board)

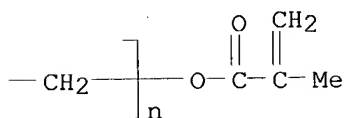
RN 41637-38-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α, α' -[(1-methylethylidene)di-4,1-
phenylene]bis[ω -[(2-methyl-1-oxo-2-propenyl)oxy]- (9CI) (CA INDEX
NAME)

PAGE 1-A



PAGE 1-B



L48 ANSWER 41 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1999:42554 HCAPLUS

DN 130:102894

TI Initiators for cationic polymerization

IN Schon, Lothar; Rogler, Wolfgang; Muhrer, Volker; Fedtke, Manfred;
Palinsky, Andreas

PA Siemens Aktiengesellschaft, Germany

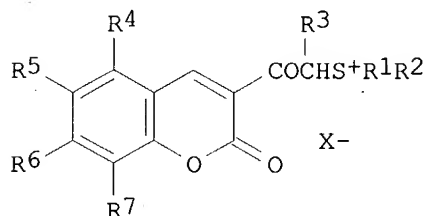
SO Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 889361	A1	19990107	EP 1998-111154	19980617
	EP 889361	B1	20020123		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	AT 212451	E	20020215	AT 1998-111154	19980617
	US 6162881	A	20001219	US 1998-105144	19980626
	JP 11035613	A2	19990209	JP 1998-201114	19980630
PRAI	DE 1997-19727820	A	19970630		
OS	MARPAT 130:102894				
GI					



AB A new photoinitiator for cationic polymerization has a following structure I (R1,

R2 = C1-9 alkyl, C4-9 cycloalkyl; R1 joining together with R2 may form C4-7 divalent aliphatic group; R3 = H, C1-9 alkyl; R4-7 = H, C1-9 alkyl, C1-9 alkoxy; X- = non-nucleophilic anion, like hexafluoroantimonate, -arsenate and -phosphate, tetraphenylborate, tetra(perfluorophenyl)borate or trifluoromethanesulfonate). The reactive resin mixture comprises (1) a cationic polymerizable monomer and/or **oligomer**, (2) the new photoinitiator, and (3) an optional filler, pigment and/or additive. The mixture, showing improved storage stability, is suitable for stereolithog.

IC ICM G03F007-029

ICS C07D311-06

CC 74-5-(Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST **photopolymn initiator cationic polymn**

photoresist stereolithog

IT **Photoresists**

Stereolithography

(**initiators** for cationic **polymerization**)

IT **Polymerization** catalysts

(**photopolymn.; initiators** for cationic **polymerization**)

IT 77-99-6, Trimethylolpropane 108-32-7, 1,2-Propylenecarbonate

1675-54-3 3130-19-6 130668-21-2

RL: TEM (Technical or engineered material use); USES (Uses)

(photocurable reactive resin mixture containing new initiator for stereolithog.)

IT 1675-54-3

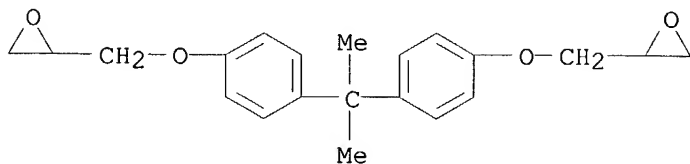
RL: TEM (Technical or engineered material use); USES (Uses)

(photocurable reactive resin mixture containing new initiator for stereolithog.)

RN 1675-54-3 HCAPLUS

CN Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-

(9CI) (CA INDEX NAME)



RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48: ANSWER 42 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1998:398620 HCAPLUS

DN 129:129009

TI Alkali-soluble **photosensitive resin composition** useful
as novel resist

IN Fujiyama, Takeshi; Furukawa, Nobuyuki

PA Nippon Steel Chemical Co., Ltd., Japan; Nippon Steel Corp.

SO Jpn. Kokai Tokkyo Koho, 12 pp.

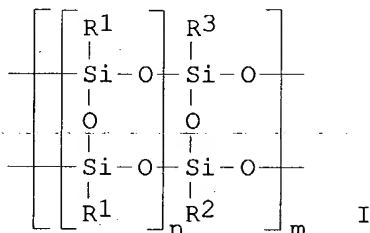
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10161315	A2	19980619	JP 1996-325508	19961205
PRAI	JP 1996-325508		19961205		
GI					



AB The title composition contains (a) a (meth)acryloxy group-containing ladder polyorganosilsesquioxane, that is crosslinked by light or heat, I [R1 = C1-4 alkyl, aryl, (substituted) monovalent hydrocarbon having a C \geq 5 alicyclic group; R2 = group having \geq 1 (meth)acryloxy bond (CH₂:CR₄CO₂)_nR₅ [R₄ = H or Me; R₅ = C1-18 (substituted) hydrocarbon with (n + 1) valences; n = 1-3]; R₃ is the same groups as defined for R₁ and R₂; n and m indicate polymerization degree and are \geq 1], (b) a CO₂H-containing polyfunctional (meth)acrylate monomer, soluble in aqueous alkali solns., (CH₂:CR₆CO₂)_kR₇ (R₆ = H or Me; R₇ = polyvalent organic group having \geq 1 CO₂H; k = 1-4), its **oligomer** or a CO₂H-containing (meth)acrylic ester copolymer, (c) a (meth)acrylic ester or a polyfunctional (meth)acrylic ester monomer or **oligomer**, and (d) a **photopolymn. initiator**. The composition is developable with aqueous alkali solns. and useful as a resist showing good thermal resistance,

elec. insulating properties, and O-plasma resistance.

IC ICM G03F007-075
ICS G03F007-027; G03F007-028; G03F007-033; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38

IT 29570-58-9, Dipentaerythritol hexaacrylate 88066-33-5 133975-88-9, Aronix M 9050 **210155-21-8**
RL: TEM (Technical or engineered material use); USES (Uses)
(photoresist composition containing acrylic polyorganosilsesquioxane and acrylic compound)

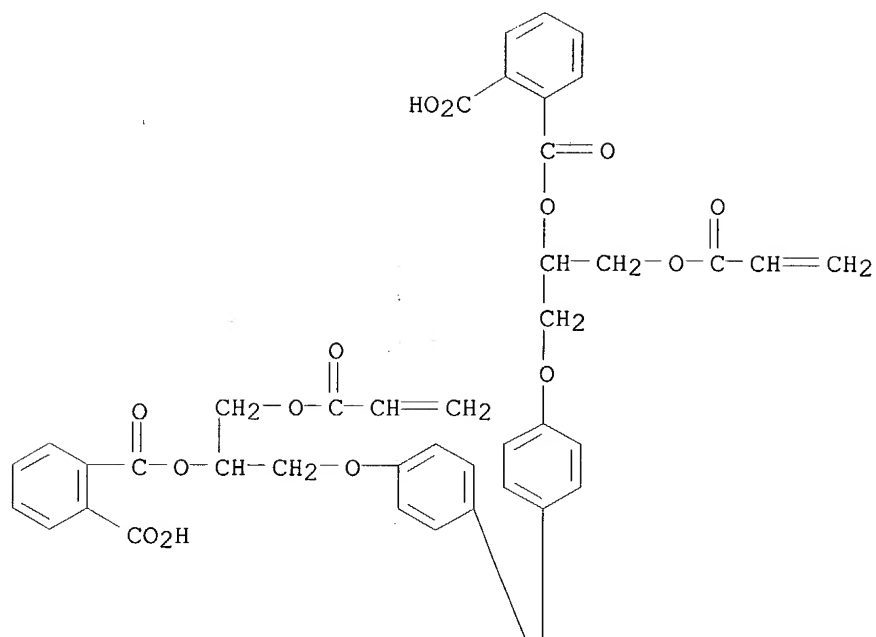
IT 68111-05-7P, Isobornyl methacrylate-methacrylic acid copolymer
210155-09-2P, (γ -Methacryloxypropyl)trichlorosilane-phenyltrichlorosilane copolymer 210155-11-6P, γ -Methacryloxypropyltrichlorosilane-methyltrichlorosilane-phenyltrichlorosilane hydrolytic copolymer 210155-14-9P
210155-17-2P 210155-19-4P, Bisphenol A diglycidyl ether diacrylate-pyromellitic anhydride copolymer
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(prepared for photoresist composition containing acrylic polyorganosilsesquioxane and acrylic compound)

IT **210155-21-8**
RL: TEM (Technical or engineered material use); USES (Uses)
(photoresist composition containing acrylic polyorganosilsesquioxane and acrylic compound)

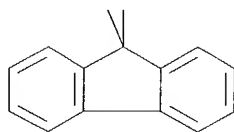
RN 210155-21-8 HCAPLUS

CN 1,2-Benzenedicarboxylic acid, 9H-fluoren-9-ylidenebis[4,1-phenyleneoxy[1-[(1-oxo-2-propenyl)oxy]methyl]-2,1-ethanediyl]] ester (9CI) (CA INDEX NAME)

PAGE 1-A

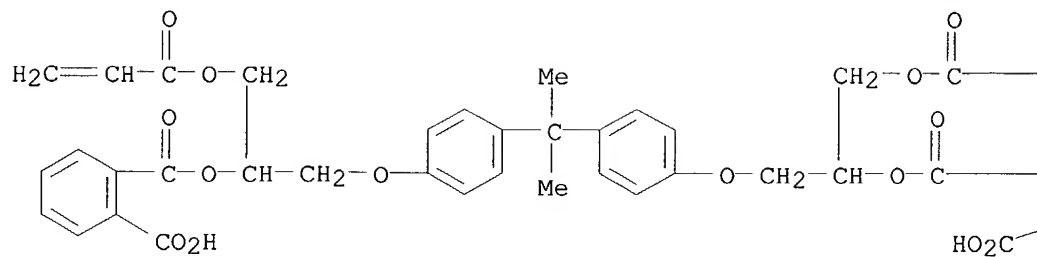


PAGE 2-A

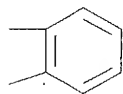
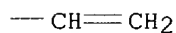


IT 210155-17-2P 210155-19-4P, Bisphenol A diglycidyl ether
 diacrylate-pyromellitic anhydride copolymer
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (prepared for photoresist composition containing acrylic
 polyorganosilsesquioxane
 and acrylic compound)
 RN 210155-17-2 HCAPLUS
 CN 1,2-Benzenedicarboxylic acid, (1-methylethylidene)bis[4,1-phenyleneoxy[1-
 [[(1-oxo-2-propenyl)oxy]methyl]-2,1-ethanediyl]] ester (9CI) (CA INDEX
 NAME)

PAGE 1-A



PAGE 1-B



RN 210155-19-4 HCAPLUS

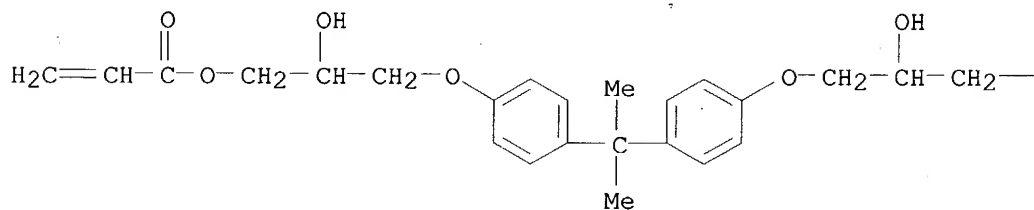
CN 2-Propenoic acid, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester, polymer with 1H,3H-benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone (9CI) (CA INDEX NAME)

CM 1

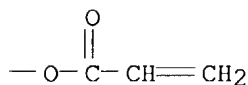
CRN 4687-94-9

CMF C27 H32 O8

PAGE 1-A

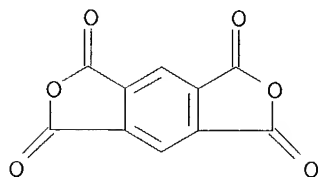


PAGE 1-B



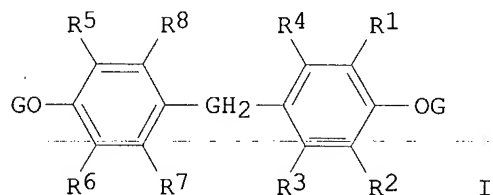
CM 2

CRN 89-32-7
CMF C10 H2 O6



L48 ANSWER 43 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:227546 HCAPLUS
DN 128:288339
TI Alkali development-type **photosensitive resin composition**
IN Kaji, Masashi; Nakahara, Kazuhiko; Ogami, Koichiro
PA Nippon Steel Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10097072	A2	19980414	JP 1996-253085	19960925
PRAI	JP 1996-253085		19960925		
OS	MARPAT 128:288339				
GI					



AB The title composition contains an epoxy acrylate resin-acid anhydride adduct, a bisphenol-type epoxy compound I (R1-8 = H, halo, C1-6 hydrocarbon; G = glycidyl group), a photopolymerizable monomer or **oligomer**, and a **photopolymerizable initiator** or a sensitizer. The alkali-developable composition provides a tack-free coating after pre-cure and the photo-cured product shows high thermal resistance, transparency, hardness, solvent resistance, and alkali resistance.

IC ICM G03F007-038
ICS G03F007-004; G03F007-027; G03F007-028; G03F007-032; H05K003-06; H05K003-28

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 76

IT **93705-66-9P 163672-68-2P** 205686-80-2P
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(alkali-developable photoresist composition containing epoxy acrylate resin-acid

anhydride adduct and epoxy compound)

IT 93705-66-9P 163672-68-2P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

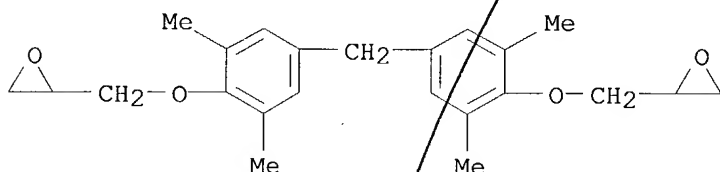
(alkali-developable photoresist composition containing epoxy acrylate

resin-acid

anhydride adduct and epoxy compound)

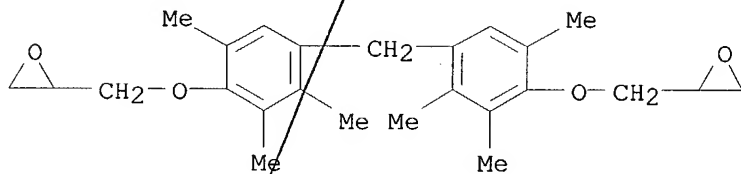
RN 93705-66-9 HCAPLUS

CN Oxirane, 2,2'-[methylenebis[(2,6-dimethyl-4,1-phenylene)oxymethylene]]bis-(9CI) (CA INDEX NAME)



RN 163672-68-2 HCAPLUS

CN Oxirane, 2,2'-[methylenebis[(2,3,6-trimethyl-4,1-phenylene)oxymethylene]]bis- (9CI) (CA INDEX NAME)



L48 ANSWER 44 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1998:217684 HCAPLUS

DN 128:315122

TI **Photosensitive resin compositions** useful in production of printed circuit boards

IN Ono, Hiroyuki; Shimose, Makoto; Miyagawa, Yutaka

PA Nippon Steel Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

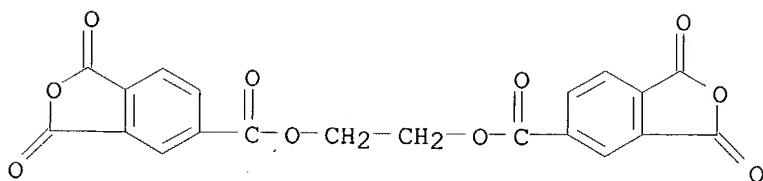
LA Japanese

FAN.CNT 1

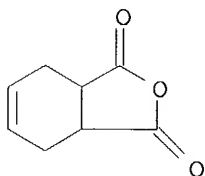
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10090887	A2	19980410	JP 1996-243643	19960913
PRAI	JP 1996-243643		19960913		

AB The title compns. comprise an **oligomer** prepared by reacting epoxy acrylates with acid anhydrides 100, an epoxy compound having ≥ 2 epoxy groups in its mol. 5-50, an indene-type **oligomer** 0.1-20, and a radical **photopolymn. initiator** 0.1-10 parts. The compns. useful in production of printed circuit boards are alkali-developable and show good adhesion to substrates, patterning properties, and elec. properties.

IC ICM G03F007-027
ICS G03F007-027; C08F299-02; C08G059-40; H05K001-03; H05K003-46
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 76
ST photoresist printed circuit board manuf; epoxy acrylate **oligomer**
photoresist; indene **oligomer** photoresist
IT Petroleum resins
RL: TEM (Technical or engineered material use); USES (Uses)
(Hiresin 120S; photoresist composition containing epoxy acrylate **oligomer**, epoxy compound, and indene **oligomer**)
IT Photoresists
(photoresist composition containing epoxy acrylate **oligomer**, epoxy compound, and indene **oligomer**)
IT **206366-84-9P 206565-71-1P**, Biphenyltetracarboxylic acid dianhydride-Epo Tohto YD 8125 acrylate-1,2,3,6-tetrahydrophthalic anhydride copolymer
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photoresist composition containing epoxy acrylate **oligomer**, epoxy compound, and indene **oligomer**)
IT 25068-38-6, Epo Tohto YD 128 61680-65-7, IP 100 (polymer) 105478-35-1, Epo Tohto YDPN 638
RL: TEM (Technical or engineered material use); USES (Uses)
(photoresist composition containing epoxy acrylate **oligomer**, epoxy compound, and indene **oligomer**)
IT **206366-84-9P 206565-71-1P**, Biphenyltetracarboxylic acid dianhydride-Epo Tohto YD 8125 acrylate-1,2,3,6-tetrahydrophthalic anhydride copolymer
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photoresist composition containing epoxy acrylate **oligomer**, epoxy compound, and indene **oligomer**)
RN 206366-84-9 HCAPLUS
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,2-ethanediyl ester, polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane] homopolymer 2-propenoate and 3a,4,7,7a-tetrahydro-1,3-isobenzofurandione (9CI) (CA INDEX NAME)
CM 1
CRN 1732-96-3
CMF C20 H10 O10



CM 2
CRN 85-43-8
CMF C8 H8 O3



CM 3

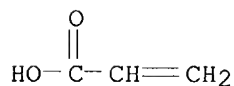
CRN 54847-34-6

CMF (C21 H24 O4)x . x C3 H4 O2

CM 4

CRN 79-10-7

CMF C3 H4 O2



CM 5

CRN 25085-99-8

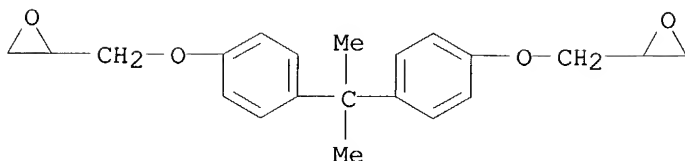
CMF (C21 H24 O4)x

CCI PMS

CM 6

CRN 1675-54-3

CMF C21 H24 O4



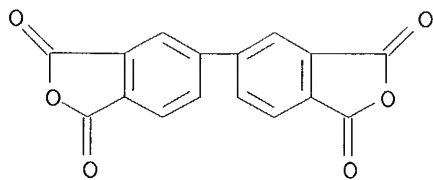
RN 206565-71-1 HCAPLUS

CN [5,5'-Biisobenzofuran]-1,1',3,3'-tetrone, polymer with
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane]
homopolymer 2-propenoate and 3a,4,7,7a-tetrahydro-1,3-isobenzofurandione
(9CI) (CA INDEX NAME)

CM 1

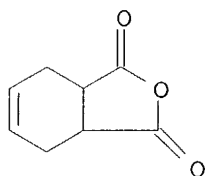
CRN 2420-87-3

CMF C16 H6 O6



CM 2

CRN 85-43-8
CMF C8 H8 O3

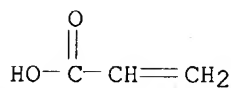


CM 3

CRN 54847-34-6
CMF (C21 H24 O4)x . x C3 H4 O2

CM 4

CRN 79-10-7
CMF C3 H4 O2

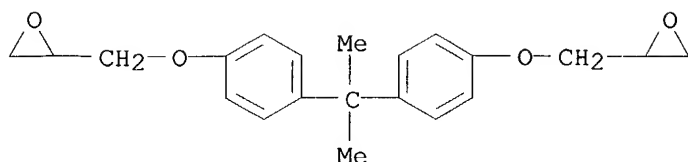


CM 5

CRN 25085-99-8
CMF (C21 H24 O4)x
CCI PMS

CM 6

CRN 1675-54-3
CMF C21 H24 O4



- L48 ANSWER 45 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1997:728124 HCAPLUS
 DN 127:359146
 TI Photoinitiated polymerization of a dimethacrylate **oligomer**: 1.
 influence of photoinitiator concentration, temperature and light intensity
 AU Lecamp, L.; Youssef, B.; Bunel, C.
 CS Institut National des Sciences Appliquees de Rouen, Mont Saint-Aignan,
 76821, Fr.
 SO Polymer (1997), 38(25), 6089-6096
 CODEN: POLMAG; ISSN: 0032-3861
 PB Elsevier
 DT Journal
 LA English
 AB The photoinitiated polymerization of dimethacrylate **oligomer** with
 2,2-dimethyl-2-hydroxyacetophenone (Darocur 1173) as radical
 photoinitiator was studied using isothermal photocalorimetry. The effect
 of temperature, light intensity and photoinitiator concentration on the
 reaction was
 investigated. The maximum conversion was obtained at .apprx.90°.
 This temperature is above the Tg of the resulting material and below the
 thermal
 polymerization temperature of the reacting system. At >90, thermal
 polymerization interferes
 with photocalorimetric measures. A maximum conversion was obtained for a
 photoinitiator concentration of 1% (weight/weight) and for the highest light
 intensity
 studied (2.7 mW/cm2).
 CC 35-3 (Chemistry of Synthetic High Polymers)
 ST ethoxylated bisphenol A dimethacrylate photopolymer;
 dimethylhydroxyacetophenone photoinitiator dimethacrylate **oligomer**
 polymer
 IT **Polymerization kinetics**
 (photopolymer.; effect of photoinitiator concentration,
 temperature and light intensity on kinetics of ethoxylated bisphenol A
 dimethacrylate photopolymer.)
 IT **Polymerization catalysts**
 (photopolymer.; effect of photoinitiator concentration,
 temperature and light intensity on photopolymer. of ethoxylated bisphenol A
 dimethacrylate using dimethylhydroxyacetophenone as initiator)
 IT **41637-38-1**, Ethoxylated bisphenol A dimethacrylate
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC
 (Process); RACT (Reactant or reagent)
 (effect of photoinitiator concentration, temperature and light intensity on
 kinetics
 of photopolymer. of)
 IT **64696-13-5P**, Ethoxylated bisphenol A dimethacrylate homopolymer
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation by photopolymer. using dimethylhydroxyacetophenone as initiator)
 IT **41637-38-1**, Ethoxylated bisphenol A dimethacrylate

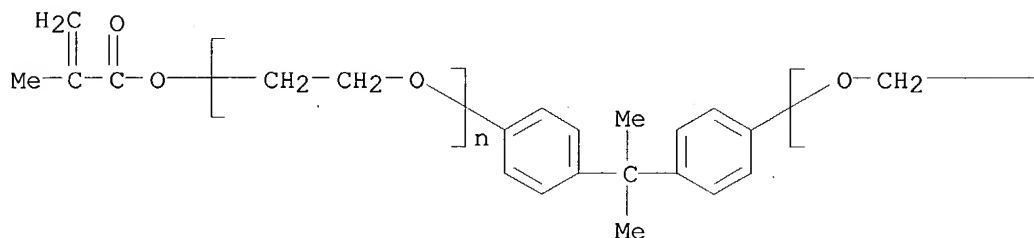
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)

(effect of photoinitiator concentration, temperature and light intensity on kinetics of photopolymn. of)

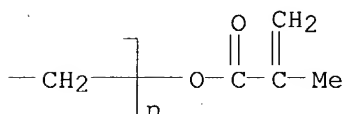
RN 41637-38-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α, α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -[(2-methyl-1-oxo-2-propenyl)oxy]- (9CI) (CA INDEX NAME)

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PAGE 1-B



IT 64696-13-5P, Ethoxylated bisphenol A dimethacrylate homopolymer

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation by photopolymn. using dimethylhydroxyacetophenone as initiator)

RN 64696-13-5 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α, α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -(2-methyl-1-oxo-2-propenyl)oxy]-, homopolymer (9CI) (CA INDEX NAME)

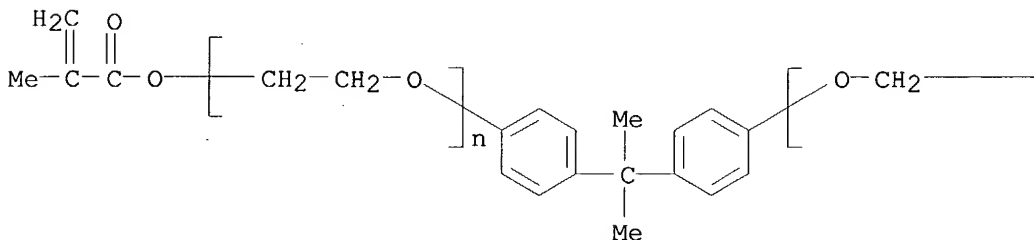
CM 1

CRN 41637-38-1

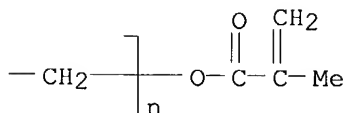
CMF (C2 H4 O)n (C2 H4 O)n C23 H24 O4

CCI PMS

PAGE 1-A



PAGE 1-B



L48 ANSWER 46 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1997:600717 HCAPLUS

DN 127:270500

TI Photopolymerizable **composition** for **photosensitive**
lithographic printing plate

IN Tsuji, Shigeo; Okamoto, Hideaki

PA Mitsubishi Chemical Corporation, Japan

SO Eur. Pat. Appl., 22 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 793145	A1	19970903	EP 1997-103156	19970226
	EP 793145	B1	20010124		
	R: DE, FR, GB, NL				
	JP 10010719	A2	19980116	JP 1996-265947	19961007
	JP 3255042	B2	20020212		
	US 5800965	A	19980901	US 1996-772569	19961226
PRAI	JP 1996-43259	A	19960229		
	JP 1996-102476	A	19960424		

AB A photopolymerizable **composition** for a **photosensitive** lithog. printing plate is provided comprising (A) addition-polymerizable ethylenically unsatd. bond-containing monomers, (B) a **photopolymn. initiator** system, and (C) a polymer binder having carboxyl groups in its mol., wherein the addition-polymerizable ethylenically unsatd. bond-containing monomers (A) contain a specific monomer which is a phosphoric acid ester compound having at least one (meth)acryloyl group and/or a compound of the formula $\text{CH}_2=\text{C}[\text{CO}_2(\text{XO})\text{mH}]\text{R}$ wherein R1 is a hydrogen atom or a Me group, X is a C1-6 alkylene group which may be branched and may be substituted by halogen, and m is an integer of at least 2 and the polymer binder (C) having carboxyl groups in its mol. is a compound having at least a part of the carboxyl groups reacted with an alicyclic epoxy group-containing unsatd. compound

IC ICM G03F007-027

ICS G03F007-033

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 95971-16-7, UA 306H

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

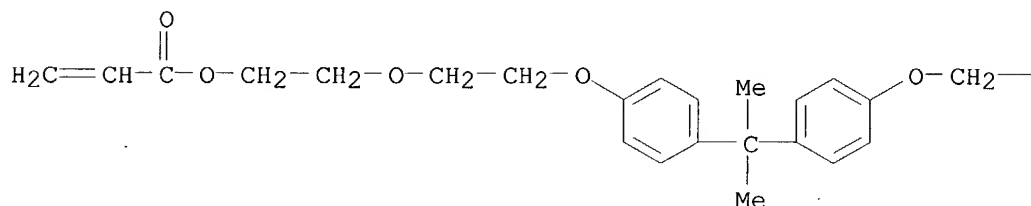
(oligomeric; presensitized lithog. plate preparation using photopolymerizable compns. containing)

IT 24599-21-1 25736-86-1 32435-46-4 **56361-55-8**, A BPE 4
125051-32-3 162461-65-6 163859-22-1 196296-02-3 196296-03-4
196296-04-5

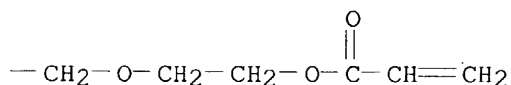
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(presensitized lithog. plate preparation using photopolymerizable compns. containing)
 IT 56361-55-8, A BPE 4
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (presensitized lithog. plate preparation using photopolymerizable compns. containing)
 RN 56361-55-8 HCAPLUS
 CN 2-Propenoic acid, (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanedioxy-2,1-ethanedioxy) ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L48 ANSWER 47 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1997:506278 HCAPLUS
 DN 127:136782
 TI Thermosetting acrylic materials of high glass transition temperature
 IN Xu, Chengzeng; Carvagno, Terri R.; Yardley, James T.
 PA Alliedsignal Inc., USA
 SO PCT-Int. Appl.; 39 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9723524	A1	19970703	WO 1996-US20310	19961220
	W: CA, CN, JP, KR, MX, SG				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
PRAI	US 1995-9099P	P	19951222		
	US 1996-764579	A	19961213		

AB The title compns., useful for optical films, contain a mixture of polymerizable acrylates containing multifunctional acrylic monomers, and multifunctional acrylic oligomers, and a bimodal polymerization initiator composition containing a mixture of either a **photopolymer initiator** or a low-temperature thermal initiator which initiates polymerization at .apprx.40-120°, and a high-temperature thermal polymerization initiator which initiates polymerization or crosslinking of the acrylates and pre-polymerized acrylates at .gtorsim.180°. The optical film are suitable as a

substrate for flat panel visual displays such as liquid crystal displays. The materials have good optical properties including low birefringence for high contrast and color purity, low haze high transmission for minimal light loss to reduce power consumption and increased brightness. The films have a high degree of flatness, good gas barrier properties, chemical resistance, scratch resistance and dimensional stability.

IC ICM C08F290-08

ICS G02F001-1333

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 67, 73, 74

IT 190957-18-7P 192817-61-1P 192817-62-2P

192817-63-3P 192817-64-4P 192817-65-5P

193014-32-3P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(thermosetting acrylic resins with high glass transition temperature for optical films)

IT 190957-18-7P 192817-61-1P 192817-63-3P

192817-64-4P 193014-32-3P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(thermosetting acrylic resins with high glass transition temperature for optical films)

RN 190957-18-7 HCAPLUS

CN 2-Propenoic acid, 2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with α, α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

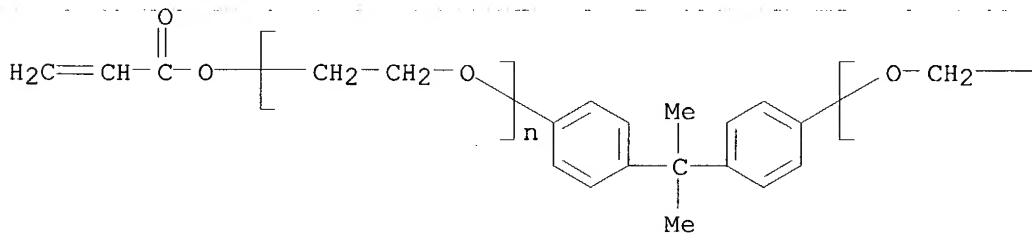
CM 1

CRN 64401-02-1

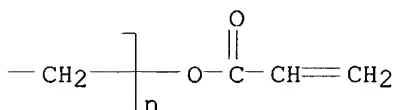
CMF (C2 H4 O)_n (C2 H4 O)_n C21 H20 O4

CCI PMS

PAGE 1-A

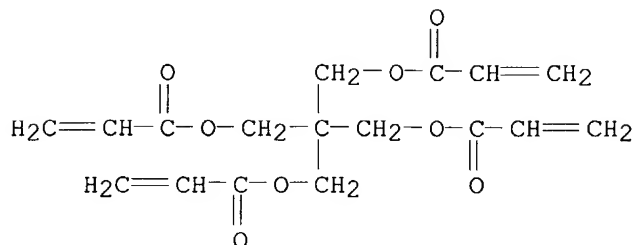


PAGE 1-B



CM 2

CRN 4986-89-4
CMF C17 H20 O8



RN	192817-61-1	HCAPLUS
CN	2-Propenoic acid, 2-ethyl-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with CN 964 and α, α' -[[(1-methylethylidene)di-4,1-phenylene]bis[ω -[[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)]] (9CI) (CA INDEX NAME)	

CM 1

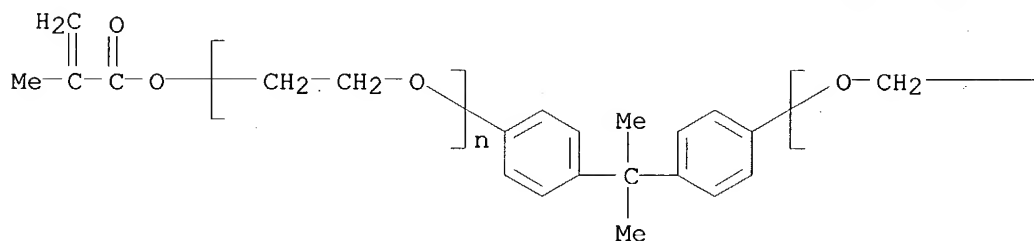
CRN 149315-73-1
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

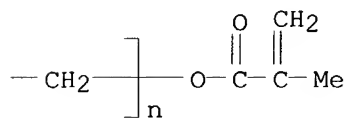
CM 2

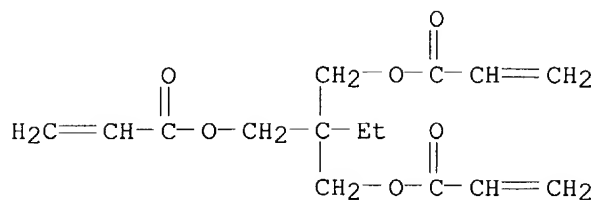
CRN 41637-38-1
CMF (C2 H4 O)n (C2 H4 O)n C23 H24 O4
CCI PMS

PAGE 1-A



PAGE 1-B

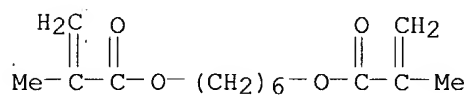




CM 3

CRN 6606-59-3

CMF C14 H22 O4



RN 192817-64-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, (1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, rel-, polymer with α,α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

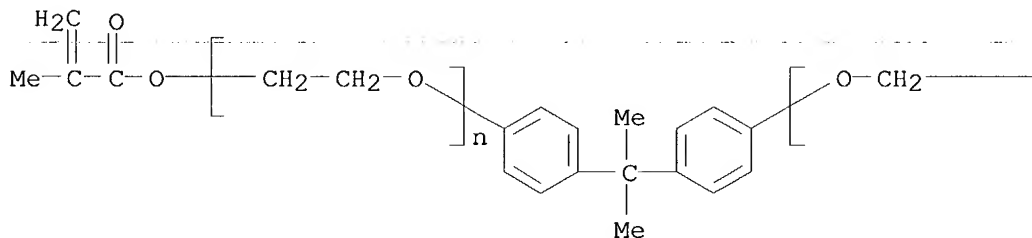
CM 1

CRN 41637-38-1

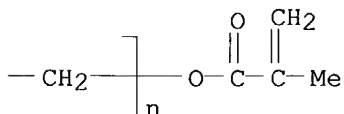
CMF (C2 H4 O)n (C2 H4 O)n C23 H24 O4

CCI PMS

PAGE 1-A



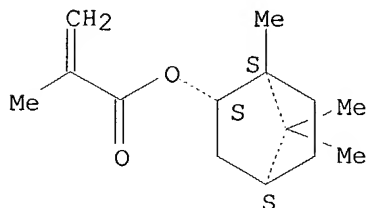
PAGE 1-B



CM 2

CRN 7534-94-3
CMF C14 H22 O2

Relative stereochemistry.



RN 193014-32-3 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α, α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -(2-methyl-1-oxo-2-propenyl)oxy]-, polymer with SR 9011 (9CI) (CA INDEX NAME)

CM 1

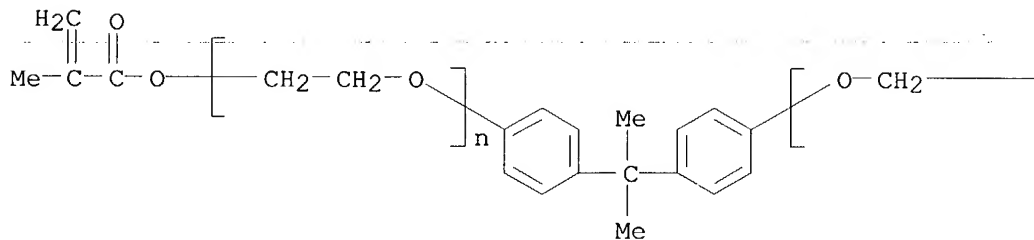
CRN 192948-52-0
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

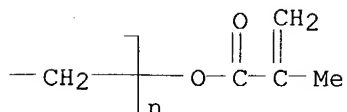
CM 2

CRN 41637-38-1
CMF (C2 H4 O)_n (C2 H4 O)_n C23 H24 O4
CCI PMS

PAGE 1-A



PAGE 1-B



L48 ANSWER 48 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1997:505613 HCAPLUS

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

DN 127:110507
 TI Light-curable coating materials for paper
 IN Saito, Takao; Maeda, Kohei; Yamada, Shigeru
 PA Sanyo Chemical Industries Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09143897	A2	19970603	JP 1995-326390	19951120
	JP 3098411	B2	20001016		
PRAI	JP 1995-326390		19951120		
AB	Coating materials contain compds. having ≥ 2 propenyl ether terminal groups, photo cationic polymerization initiators , and reactive diluents. Thus, a coating material contained dipropenyl ether group-terminated PET polyester 80, UVR 6974 3, ethylene glycol monopropenyl ether 20 parts.				
IC	ICM D21H019-24 ICS C09D004-00; C09D163-10; C09D167-07; C09D171-02; C09D175-16; C09D201-06				
CC	43-7 (Cellulose, Lignin, Paper, and Other Wood Products) Section cross-reference(s): 42				
ST	UV crosslinking coating paper; propenyl ether terminal oligomer coating; photo cationic polymer catalyst				
IT	Paper (UV-curable coating materials containing propenyl ether group-terminated oligomers and ethylene glycol monopropenyl ether and catalysts for paper)				
IT	Sulfonium compounds RL: CAT (Catalyst use); USES (Uses) (UV-curable coating materials containing propenyl ether group-terminated oligomers and ethylene glycol monopropenyl ether and catalysts for paper)				
IT	Coating materials (UV-curable; UV-curable coating materials containing propenyl ether group-terminated oligomers and ethylene glycol monopropenyl ether and catalysts for paper)				
IT	Polycarbonates, uses Polyesters, uses Polyoxyalkylenes, uses Polyurethanes, uses RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (oligomers , propenyl ether group-terminated, polymers with ethylene glycol monopropenyl ether; UV-curable coating materials containing propenyl ether group-terminated oligomers and ethylene glycol monopropenyl ether and catalysts for paper)				
IT	Polymerization catalysts (photopolymer; UV-curable coating materials containing propenyl ether group-terminated oligomers and ethylene glycol monopropenyl ether and catalysts for paper)				
IT	Ethers, uses RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (propenyl ether group-terminated oligomers , polymers with ethylene glycol monopropenyl ether; UV-curable coating materials containing propenyl ether group-terminated oligomers and ethylene glycol				

monopropenyl ether and catalysts for paper)

IT **Oligomers**
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (propenyl ether group-terminated, polymers with ethylene glycol monopropenyl ether; UV-curable coating materials containing propenyl ether group-terminated **oligomers** and ethylene glycol monopropenyl ether and catalysts for paper)

IT 71449-78-0, 4-(Phenylthio)phenyldiphenylsulfonium hexafluoroantimonate
 105046-46-6, Bis[4-(diphenylsulfonio)phenyl]sulfide
 bishexafluoroantimonate 176742-27-1, UVR 6974
 RL: CAT (Catalyst use); USES (Uses)
 (UV-curable coating materials containing propenyl ether group-terminated **oligomers** and ethylene glycol monopropenyl ether and catalysts for paper)

IT 30350-19-7DP, Carbonic acid-triethylene glycol copolymer, dipropenyl ether-terminated, polymers with ethylene glycol monopropenyl ether
 32877-92-2DP, dipropenyl ether-terminated, polymers with ethylene glycol monopropenyl ether 191666-48-5P 191666-49-6P **191803-19-7P**
 191803-20-0P 191934-59-5P 192317-59-2DP, dipropenyl ether-terminated, polymers with ethylene glycol monopropenyl ether
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (UV-curable coating materials containing propenyl ether group-terminated **oligomers** and ethylene glycol monopropenyl ether and catalysts for paper)

IT 161014-94-4P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polymers with dipropenyl ether-terminated **oligomers**;
 UV-curable coating materials containing propenyl ether group-terminated **oligomers** and ethylene glycol monopropenyl ether and catalysts for paper)

IT **191803-19-7P**
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (UV-curable coating materials containing propenyl ether group-terminated **oligomers** and ethylene glycol monopropenyl ether and catalysts for paper)

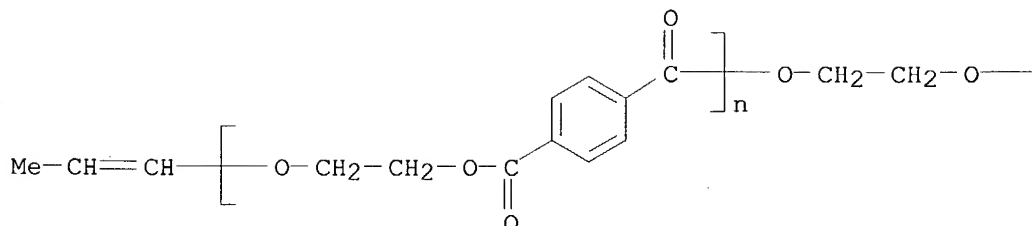
RN 191803-19-7 HCAPLUS

CN Ethanol, 2-(1-propenyloxy)-, polymer with α -1-propenyl- ω -[2-(1-propenyloxy)ethoxy]poly(oxy-1,2-ethanedioxyloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)

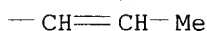
CM 1

CRN 191538-28-0
 CMF (C10 H8 O4)n C8 H14 O2
 CCI PMS

PAGE 1-A



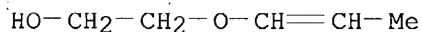
PAGE 1-B



CM 2

CRN 161014-94-4

CMF C5 H10 O2



L48 ANSWER 49 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1997:164635 HCAPLUS

DN 126:158576

TI Methacrylate **oligomer** compositions for tape materials for ultraviolet ray-curable optical fibers

IN Kosakai, Shohei; Asano, Masatoshi; Abe, Tetsuo; Nishimura, Mitsuhiro

PA Shinetsu Chemical Industry Co., Ltd., Japan; Takeda Chemical Industries Ltd

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08333524	A2	19961217	JP 1996-108542	19960404
PRAI	JP 1995-104687		19950405		
	JP 1995-104822		19950405		

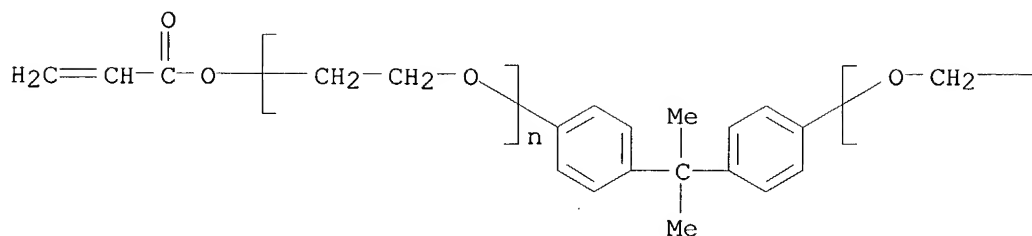
AB The compns. giving cured compds. with good blocking resistance and leveling property contain (meth)acrylate **oligomers** 100, reactive diluents having **polymerizable** double bonds 10-200, **photopolymn. initiators** 0.1-10, fine-grained particles with size $\leq 50 \mu\text{m}$ 0.1-10, and optionally linear Me Ph polysiloxanes containing 10-50 mol% Ph groups 0.1-5 parts. Thus, an urethane acrylate **oligomer** prepared from PTMG 2000 150, PTMG 1000 150, neopentyl glycol 31.6, 2,4-tolylene diisocyanate 175.4 g 55, tricyclodecanedimethanol diacrylate 15, bisphenol A ethylene oxide-modified diacrylate (M 210) 10, N-vinylpyrrolidone 10, isobornyl

Doesn't
say
anything
about
development

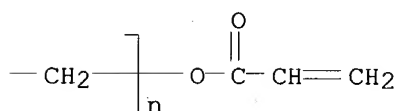
acrylate 10, and 1-hydroxycyclohexyl Ph ketone 3 parts were mixed to give a resin composition, 100 parts of which was mixed with 2 parts trimethylsilyl-treated silica particles, coated on a glass plate, and UV-irradiated to give a test piece showing good blocking resistance and Young's modulus of elasticity 74.

- IC ICM C09D004-02
ICS C09D004-02; C08F002-44
- CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 37, 42
- ST methacrylate **oligomer** UV curing tape material; optical fiber UV curable acrylate **oligomer**; photopolymn methacrylate **oligomer** reactive diluent silica
- IT Optical fibers
(meth)acrylate **oligomer** for tape materials for UV ray-curable optical fibers)
- IT Polymerization catalysts
(photopolymn.; (meth)acrylate **oligomer** for tape materials for UV ray-curable optical fibers)
- IT Materials
(tapes; (meth)acrylate **oligomer** for tape materials for UV ray-curable optical fibers)
- IT 143073-53-4P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(meth)acrylate **oligomer** compns. for tape materials for UV ray-curable optical fibers)
- IT 156048-34-9D, Dimethylsilanediol-diphenylsilanediol copolymer, trimethylsilyl-terminated
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(meth)acrylate **oligomer** for tape materials for UV ray-curable optical fibers)
- IT 88-12-0, uses 5888-33-5, Isobornyl acrylate 42594-17-2
64401-02-1, Aronix M 210
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(diluent for **oligomer** compns.; (meth)acrylate **oligomer** for tape materials for UV ray-curable optical fibers)
- IT 947-19-3, 1-Hydroxycyclohexyl phenyl ketone
RL: CAT (Catalyst use); USES (Uses)
(photopolymn. initiators; (meth)acrylate **oligomer** for tape materials for UV ray-curable optical fibers)
- IT 7631-86-9P, Admafine SO-C 5, uses
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(silyl group having; (meth)acrylate **oligomer** for tape materials for UV ray-curable optical fibers)
- IT **64401-02-1**, Aronix M 210
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(diluent for **oligomer** compns.; (meth)acrylate **oligomer** for tape materials for UV ray-curable optical fibers)
- RN **64401-02-1** HCAPLUS
- CN Poly(oxy-1,2-ethanediyl), α,α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -(1-oxo-2-propenyl)oxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



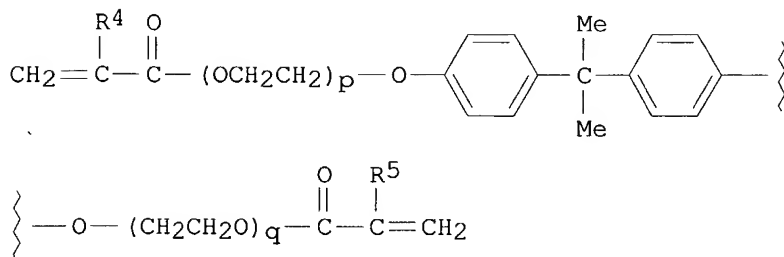
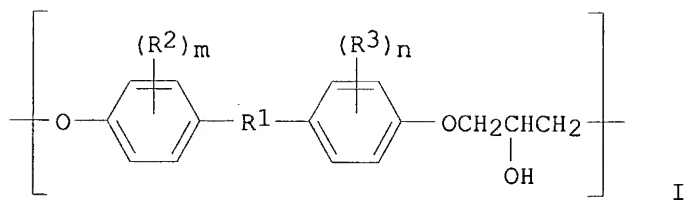
PAGE 1-B



L48 ANSWER 50 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1996:743286 HCAPLUS
 DN 126:39718
 TI **Photosensitive resin composition,**
photosensitive film, and manufacture of solder resist
 IN Tsuchikawa, Shinji; Ishimaru, Toshiaki; Oota, Fumihiko; Nojiri, Takeshi
 PA Hitachi Chemical Co Ltd, Japan
 SO Jpn. Kokai Tokkyo Koho, 11 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08234430	A2	19960913	JP 1995-40077	19950228
PRAT	JP 1995-40077		19950228		
GI					





II

AB The composition comprises (A) a polyhydroxyether resin with repeating unit I (R1 = divalent saturated aliphatic hydrocarbon; R2-3 = C 1-4 alkyl, C 1-4 alkoxy,

halo; m, n = 0-4), (B) an unsatd. group-containing urethane **oligomer** prepared by bonding unsatd. organooxycarbonylimide group with the terminals of the urethane **oligomer** (average mol. weight 1000-100,000) prepared by linking co-carbonate (average mol. weight 600-1000) having O(CH₂)₆OOC (a) and O(CH₂)₅OOC (b) as structural units [a/b = (9-1)/(1-9)] and OH groups at the terminals with organic isocyanates, (C) polymerizable compound with ethylenic unsatd. II (R4-5 = H, Me; p + q = 8-12), and (D) a **photopolymer. initiator** generating free radical by irradiation The composition is applied on a film substrate and dried to give

the

photosensitive film. The composition is applied on a substrate, dried, imagewise exposed, and developed with an aqueous solution containing 1-90

volume%

3-methyl-3-methoxybutyl acetate to give the solder resist. The **composition** shows high **photosensitivity**, good flexibility and heat resistance.

IC ICM G03F007-033

ICS G03F007-027; H05K003-28

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 37

IT Polyurethanes, uses

Polyurethanes, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(polycarbonate-; solder resist composition containing polyhydroxy ether resin

and urethane **oligomer**)

IT Polycarbonates, uses

Polycarbonates, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(polyurethane-; solder resist composition containing polyhydroxy ether resin and

urethane oligomer)

IT Solder resists
(solder resist composition containing polyhydroxy ether resin and urethane oligomer)

IT Polyethers, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(solder resist composition containing polyhydroxy ether resin and urethane oligomer)

IT 25068-38-6
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(UCAR Phenoxyl PKHJ; solder resist composition containing polyhydroxy ether resin and urethane oligomer)

IT 818-61-1DP, reaction products with urethane oligomer
134910-59-1P, Pratherm EP 500 159384-56-2DP, reaction products with hydroxyethyl acrylate 159384-57-3DP, reaction products with urethane oligomer
RL: PNU (Preparation, unclassified); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(solder resist composition containing polyhydroxy ether resin and urethane oligomer)

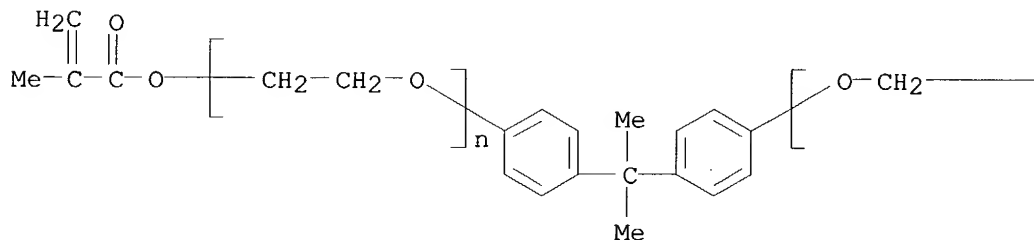
IT 41637-38-1, BPE 500
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(solder resist composition containing polyhydroxy ether resin and urethane oligomer)

IT 41637-38-1, BPE 500
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(solder resist composition containing polyhydroxy ether resin and urethane oligomer)

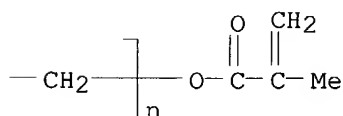
RN 41637-38-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α, α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -[(2-methyl-1-oxo-2-propenyl)oxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



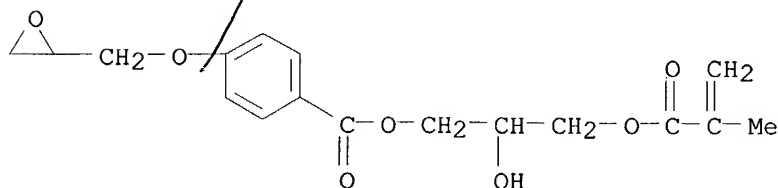
L48 ANSWER 51 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1996:254275 HCAPLUS
 DN 124:302104
 TI Photopolymerizing composition
 IN Nikiforenko, V. S.; Podolskaya, L. A.; Zadontsev, B. G.; Zajtsev, Yu. S.;
 Burmenko, A. S.; Lipskaya, V. A.; Mikhajlova, L. N.; Klebanov, M. S.
 PA USSR
 SO U.S.S.R.

From: Izobreteniya 1995, (18), 267.

CODEN: URXXAF

DT Patent
 LA Russian
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	SU 1591688	A1	19950627	SU 1989-4643806	19890130
PRAI	SU 1989-4643806		19890130		
AB	Title only translated.				
IC	ICM G03F007-00				
CC	73-12 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)				
	Section cross-reference(s): 74				
ST	waveguide protection photopolymerizing compn epoxyacrylic oligomer				
IT	Epoxy resins, uses				
	RL: TEM (Technical or engineered material use); USES (Uses) (acrylates, photopolymg. composition for waveguide protective layer fabrication)				
IT	Waveguides (optical, photopolymg. composition for waveguide protective layer fabrication)				
IT	24650-42-8, 2,2-Dimethoxy-2-phenylacetophenone				
	RL: TEM (Technical or engineered material use); USES (Uses) (photoinitiator ; photopolymg. composition for waveguide protective layer fabrication)				
IT	103018-62-8 175783-09-2				
	RL: TEM (Technical or engineered material use); USES (Uses) (photopolymg. composition for waveguide protective layer fabrication)				
IT	175783-09-2				
	RL: TEM (Technical or engineered material use); USES (Uses) (photopolymg. composition for waveguide protective layer fabrication)				
RN	175783-09-2 HCAPLUS				
CN	Benzoic acid, 4-(oxiranylethoxy)-, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester (9CI) (CA INDEX NAME)				



L48 ANSWER 52 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1996:241564 HCAPLUS

DN 124:274602

TI Holographic photosensitive recording material and manufacture of hologram

IN Ito, Hiromitsu; Ooe, Yasushi; Watanabe, Jiro

PA Toppan Printing Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08016077	A2	19960119	JP 1994-148245	19940629
	JP 3075082	B2	20000807		
PRAI	JP 1994-148245		19940629		

AB The holog. photosensitive recording material comprises (1) a heat-hardenable epoxy **oligomer** which, containing a fluorenone derivative, is soluble in a solvent, a cationically polymerizable, and solid at room temperature and an atmospheric pressure, (2) a polymerizable monomer which, having

different refractive index from that of (1), is solid at room temperature and an

atmospheric pressure, has a b.p. $\geq 100^\circ$ at an atmospheric pressure and has ≥ 1 **polymerizable** ethylenic unsatd bond, (3) a

photopolymn. initiator capable of forming radicals, a

Bronsted acid, or a Lewis acid to initiate radical or cationic polymerization, and (4) a sensitizing dye for the initiator. (3) May be diphenylidonium

salt, and (4) may be a (mero)cyanine, coumarin, chalcone, or porphyrin dye. The process comprises heat-treating the material at $60-120^\circ$

for 1-30 min after forming a latent image by a holog. exposure.

IC ICM G03H001-02

ICS G03F007-004; G03F007-027; G03F007-029

CC 74-10 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 1680-21-3, Triethylene glycol diacrylate 2223-82-7, Neopentyl glycol

diacrylate 4074-88-8, Diethylene glycol diacrylate 7328-17-8,

Ethylcarbitol acrylate 160632-36-0 175596-52-8

175596-53-9 175596-54-0 175596-55-1

175596-56-2 175596-57-3 175596-58-4

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(holog. photosensitive recording material and manufacture of hologram)

IT 175596-52-8 175596-53-9 175596-54-0

175596-55-1 175596-56-2 175596-57-3

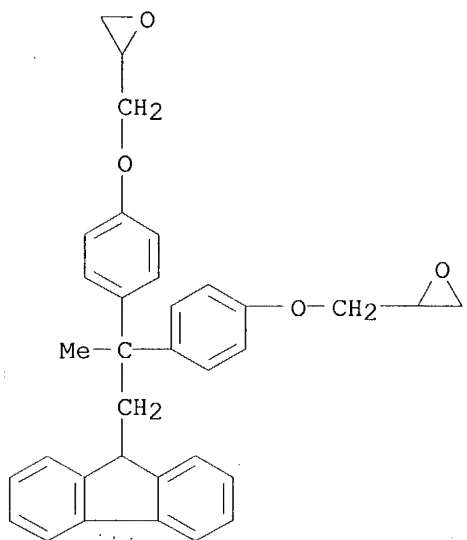
175596-58-4

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(holog. photosensitive recording material and manufacture of hologram)

RN 175596-52-8 HCAPLUS

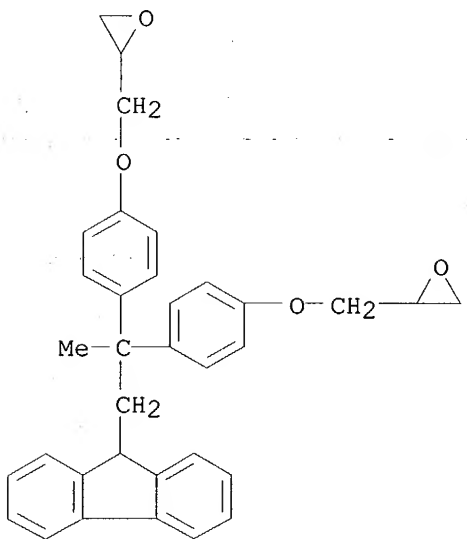
CN Oxirane, 2,2'-[[1-(9H-fluoren-9-ylmethyl)ethylidene]bis(4,1-phenyleneoxymethylene)]bis- (9CI) (CA INDEX NAME)



RN 175596-53-9 HCAPLUS
 CN 2-Propenoic acid, oxydi-2,1-ethanediyl ester, polymer with
 2,2'-[[2-(9H-fluoren-9-yl)-1-methylethylidene]bis(4,1-
 phenyleneoxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

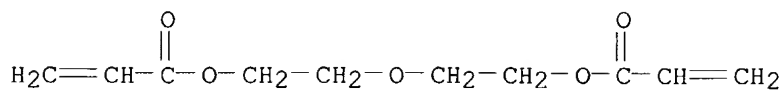
CM 1

CRN 175596-52-8
 CMF C34 H32 O4



CM 2

CRN 4074-88-8
 CMF C10 H14 O5



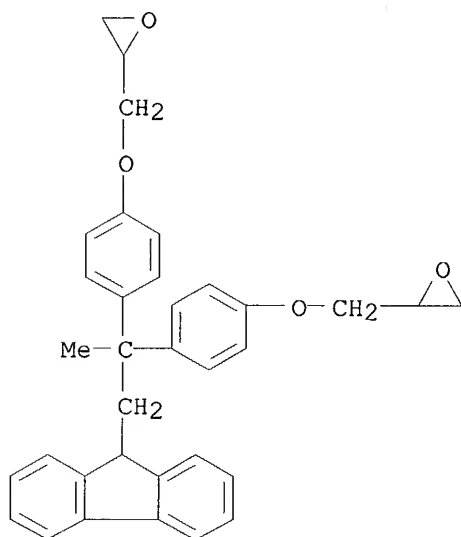
RN 175596-54-0 HCAPLUS

CN 2-Propenoic acid, 2,2-dimethyl-1,3-propanediyl ester, polymer with 2,2'-[[2-(9H-fluoren-9-yl)-1-methylethylidene]bis(4,1-phenyleneoxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

CM 1

CRN 175596-52-8

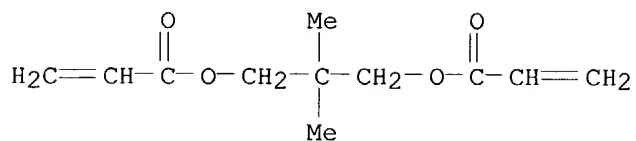
CMF C34 H32 O4



CM 2

CRN 2223-82-7

CMF C11 H16 O4

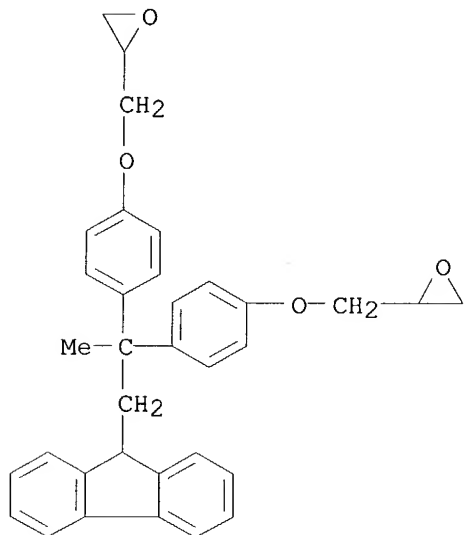


RN 175596-55-1 HCAPLUS

CN 2-Propenoic acid, 2-(2-ethoxyethoxy)ethyl ester, polymer with 2,2'-[[2-(9H-fluoren-9-yl)-1-methylethylidene]bis(4,1-phenyleneoxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

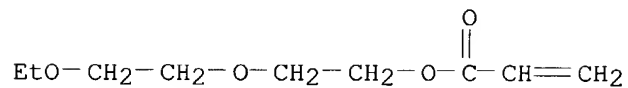
CM 1

CRN 175596-52-8
CMF C34 H32 O4



CM 2

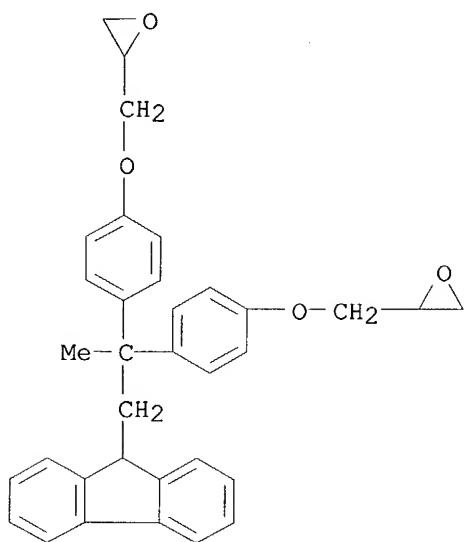
CRN 7328-17-8
CMF C9 H16 O4



RN 175596-56-2 HCAPLUS
CN 2-Propenoic acid, oxybis(2,1-ethanediylloxy-2,1-ethanediyl) ester, polymer with 2,2'-[[2-(9H-fluoren-9-yl)-1-methylethylidene]bis(4,1-phenyleneoxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

CM 1

CRN 175596-52-8
CMF C34 H32 O4

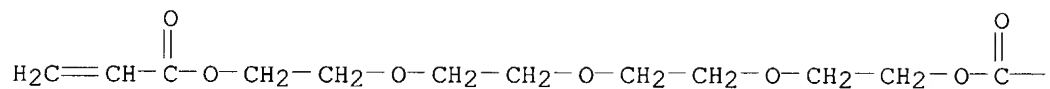


CM 2

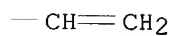
CRN 17831-71-9

CMF C14 H22 O7

PAGE 1-A

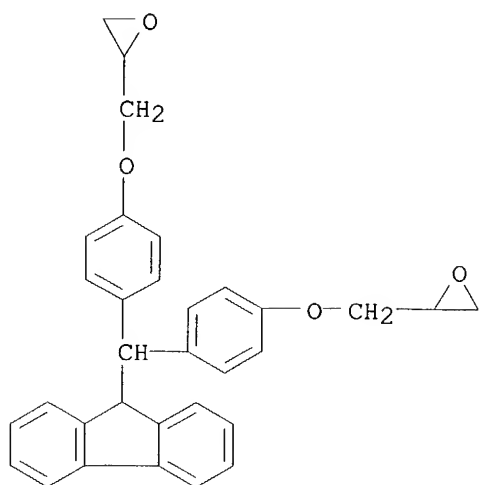


PAGE 1-B



RN 175596-57-3 HCAPLUS

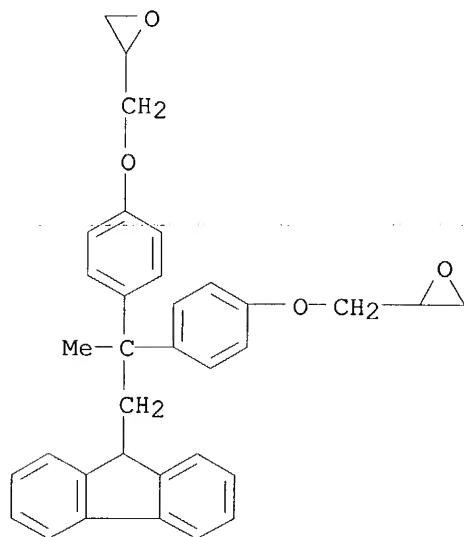
CN Oxirane, 2,2'-[(9H-fluoren-9-ylmethylene)bis(4,1-phenyleneoxymethylene)]bis- (9CI) (CA INDEX NAME)



RN 175596-58-4 HCAPLUS
 CN Oxirane, 2,2'-[[2-(9H-fluoren-9-yl)-1-methylethylidene]bis(4,1-phenyleneoxymethylene)]bis-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 175596-52-8
 CMF C34 H32 O4

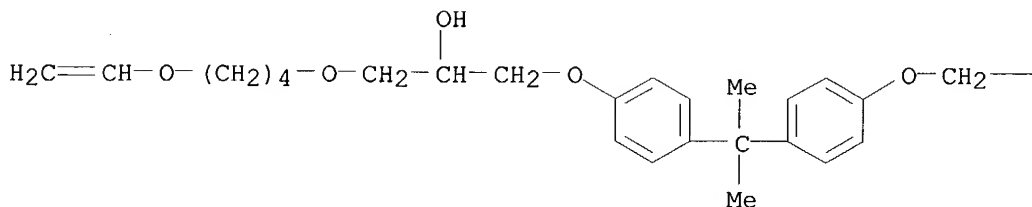


L48 ANSWER 53 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1996:84385 HCAPLUS
 DN 124:177039
 TI **Photo-initiated cationic polymerization of multifunctional systems**
 AU Decker, Christian; Decker, Danielle; Trieu Nguyen Thi Viet; Hien Le Xuan
 CS Laboratoire Photochimie Generale, Ecole Nationale Supérieure

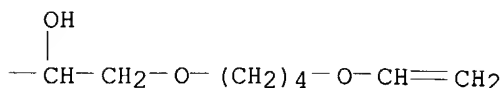
KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

Chimie-Universite, Mulhouse, 68200, Fr.
 SO Macromolecular Symposia (1996), 102(9th Rolduc Polymer Meeting, Smart
 Polymer Materials & Products, 1995), 63-71
 CODEN: MSYMEC; ISSN: 1022-1360
 PB Huethig & Wepf
 DT Journal
 LA English
 AB Different types of tridimensional polymer networks have been synthesized
 by **photo-initiated** cationic **polymerization** of vinyl
 ether and epoxy-functionalized **oligomers** and polymers. The
 polymerization kinetics was followed by real-time IR (RTIR) spectroscopy, a
 technique that records directly conversion vs. time profiles in a
 time-scale as short as 1 s. The addition of a diacrylate monomer was shown
 to accelerate the ring-opening polymerization of epoxidized polyisoprene, with
 formation of interpenetrating polymer networks having well contrasted
 properties. A dual polymer network has been generated by
 photo-crosslinking of a polyisoprene functionalized with both epoxy and
 acrylate groups.
 CC 35-3 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 37
 IT Kinetics of **polymerization**
 (photochem., kinetics of **photoinitiated** cationic
polymerization of multifunctional systems)
 IT 79-10-7D, 2-Propenoic acid, reaction products with epoxidized polyisoprene
 765-12-8, 3,6,9,12-Tetraoxatetradeca-1,13-diene 2386-87-0 9003-31-0D,
 Polyisoprene, epoxidized 13048-33-4 15625-89-5 **173931-37-8**
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC
 (Process); RACT (Reactant or reagent)
 (kinetics of photoinitiated cationic polymerization of multifunctional
 systems)
 IT **173931-37-8**
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC
 (Process); RACT (Reactant or reagent)
 (kinetics of photoinitiated cationic polymerization of multifunctional
 systems)
 RN 173931-37-8 HCAPLUS
 CN 2-Propanol, 1,1'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bis[3-[4-
 (ethenyloxy)butoxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L48 ANSWER 54 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1995:874888 HCAPLUS
 DN 123:301626

TI **Photosensitive resin composition** for hologram
 recording and hologram recording media

IN Ito, Hiromitsu; Ooe, Yasushi

PA Toppan Printing Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

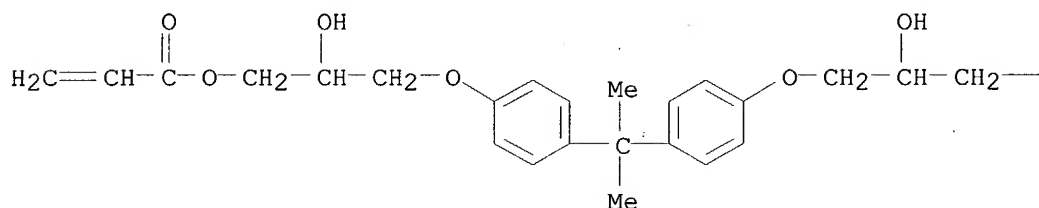
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07199777	A2	19950804	JP 1993-335304	19931228
PRAI	JP 1993-335304		19931228		
AB	The title composition comprises (A) reactive oligomer comprised of (Br- or Cl-substituted) aromatic ring-containing structural repeating unit and containing ≥ 1 ethylenic unsatd. bonds, (B) compound containing ≥ 1 ethylenic unsatd. bonds, (C) photopolymer initiator .				
IC	ICM G03H001-02 ICS G03F007-004; G03F007-027; G03F007-028; G03F007-038				
CC	74-8 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)				
ST	photosensitive resin compn hologram recording				
IT	Holography (photosensitive resin composition for hologram recording and hologram recording media)				
IT	Polyesters, uses Urethane polymers, uses RL: DEV (Device component use); USES (Uses) (acrylate-terminated, photosensitive resin composition for hologram recording comprising)				
IT	Epoxy resins, uses RL: DEV (Device component use); USES (Uses) (acrylates, photosensitive resin composition for hologram recording comprising)				
IT	Recording materials (holog., photosensitive resin composition for hologram recording and hologram recording media)				
IT	Phenolic resins, uses RL: DEV (Device component use); USES (Uses) (novolak, acrylates, RNEA; photosensitive resin compn for hologram recording comprising)				
IT	Holography (recording materials, photosensitive resin composition for hologram recording and hologram recording media)				
IT	407-47-6, 2,2,2-Trifluoroethyl acrylate 2223-82-7, Neopentylglycol diacrylate 3524-68-3, Pentaerythritol triacrylate 4074-88-8, Diethyleneglycol diacrylate 4687-94-9 , Ebecryl 600 13048-33-4, 1,6-Hexanediol diacrylate 15625-89-5, Trimethylolpropane triacrylate 50843-44-2, Ebecryl 220 55127-80-5 , Ebecryl 3700 58109-40-3, Diphenyliodonium hexafluorophosphate 76723-57-4, Aronix M 7100 84170-75-2, Ebecryl 210 89190-99-8, Aronix M 1100 92679-62-4, Aronix M 8100 133924-23-9, Aronix M 1310 133975-88-9, Aronix M 9050 135990-97-5, Ebecryl 3701 135991-02-5, Ebecryl 6700 136403-00-4, 2,2',5,5'-Tetra(tert-butylperoxycarbonyl)benzophenone 136752-28-8, Ebecryl 4827 169741-53-1, RNEA				

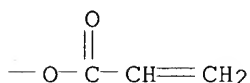
Oral translation says
 "No wet development"
 ↓
 Dry development

RL: DEV (Device component use); USES (Uses)
 (photosensitive resin composition for hologram recording comprising)
 IT 4687-94-9, Ebecryl 600 55127-80-5, Ebecryl 3700
 RL: DEV (Device component use); USES (Uses)
 (photosensitive resin composition for hologram recording comprising)
 RN 4687-94-9 HCAPLUS
 CN 2-Propenoic acid, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester (9CI) (CA INDEX NAME)

PAGE 1-A



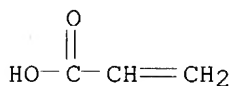
PAGE 1-B



RN 55127-80-5 HCAPLUS
 CN Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-, homopolymer, di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7
 CMF C3 H4 O2

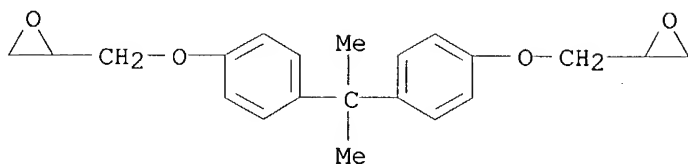


CM 2

CRN 25085-99-8
 CMF (C21 H24 O4)x
 CCI PMS

CM 3

CRN 1675-54-3
 CMF C21 H24 O4



L48 ANSWER 55 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1995:708489 HCAPLUS

DN 123:172879

TI Crack-resistant electrically insulated cables

IN Kato, Yoshihisa; Kikuchi, Hideyuki; Suga, Myuki; Takahata, Norio; Kasai, Takanori; Kazami, Junichi; Kobayashi, Masayuki

PA Hitachi Cable, Japan; Denki Kagaku Kogyo Kk

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07057551	A2	19950303	JP 1993-215279	19930806
PRAI	JP 1993-215279		19930806		

AB Title cables comprise elec. wires and UV-curable resin compns. containing **photochem. initiators and polymerizable oligomers** having 1-20% functional groups. A Cu wire was coated with a composition containing an initiator 10, isobornyl methacrylate 100, and

NK Ester U 122A 100 parts to a 15- μ m thickness and irradiated with UV to give a wire with solderability at 380°, breakdown voltage 5.8 kV, and crack resistance when winding.

IC ICM H01B007-02

ICS H01B003-30

ICA C08F290-00

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 76

IT 160460-23-1 **165535-23-9** 166119-55-7 166119-56-8

166119-57-9 167323-85-5

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(UV-curable elec. insulators with crack resistance and low soldering temperature)

IT **165535-23-9**

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(UV-curable elec. insulators with crack resistance and low soldering temperature)

RN 165535-23-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, tricyclo[3.3.1.1^{3,7}]decyl ester, polymer with (1-methylethylidene)bis[4,1-phenyleneoxy(methyl-2,1-ethanediyl)oxy(2-hydroxy-3,1-propanediyl)] di-2-propenoate (9CI) (CA INDEX NAME)

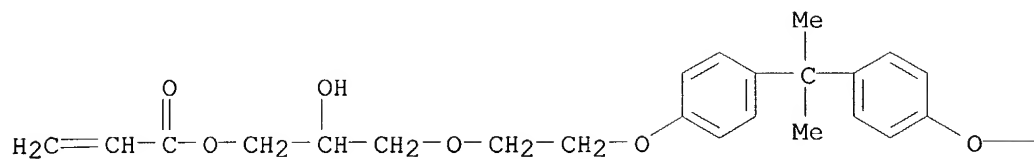
CM 1

CRN 105650-05-3

CMF C33 H44 O10

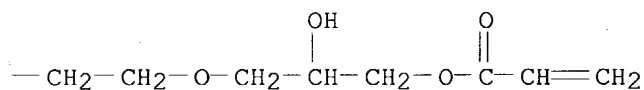
CCI IDS

PAGE 1-A



2 (D1-Me)

PAGE 1-B

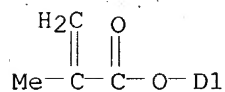
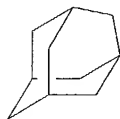


CM 2

CRN 71097-48-8

CMF C14 H20 O2

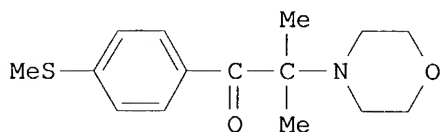
CCI IDS



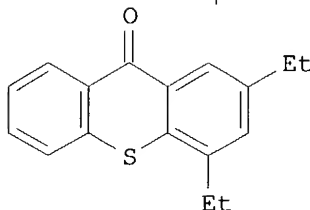
L48 ANSWER 56 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1995:547758 HCAPLUS
 DN 123:70292
 TI Electrophotographic photoreceptor having acrylic polymer protective layer
 IN Sekya, Micho; Nakamura, Kazunari
 PA Canon Kk, Japan
 SO Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI JP 07064313 A2 19950310 JP 1993-232228 19930826
 PRAI JP 1993-232228 19930826
 GI



I



II

AB The photoreceptor consists of an elec. conductive support successively coated with a photosensitive layer and a protective layer where an elec. conducting metal oxide is dispersed in a binder resin containing a photocurable acrylic monomer, its **oligomer**, I, and II. The photoreceptor may have an interlayer between the photosensitive layer and the protective layer. The photoreceptor showed good repeating durability.

IC ICM G03G005-147
 ICS G03G005-147

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 Section cross-reference(s): 35

IT **80164-51-8** 93196-90-8, T 1 (conductor) 116321-27-8
 RL: DEV (Device component use); USES (Uses)
 (electrophotog. photoreceptor having metal oxide-containing acrylic polymer protective layer with good repeating durability)

IT 71868-10-5 82799-44-8
 RL: CAT (Catalyst use); USES (Uses)
 (**polymerization initiator**; electrophotog. photoreceptor having metal oxide-containing acrylic polymer protective layer with good repeating durability)

IT **80164-51-8**
 RL: DEV (Device component use); USES (Uses)
 (electrophotog. photoreceptor having metal oxide-containing acrylic polymer protective layer with good repeating durability)

RN 80164-51-8 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α,α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -[(1-oxo-2-propenyl)oxy]-, homopolymer (9CI) (CA INDEX NAME)

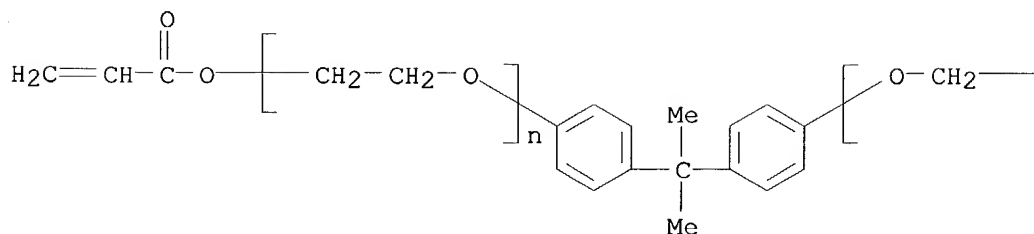
CM 1

CRN 64401-02-1

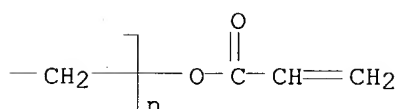
CMF (C2 H4 O)_n (C2 H4 O)_n C21 H20 O4

CCI PMS

PAGE 1-A



PAGE 1-B



L48 ANSWER 57 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1995:528615 HCAPLUS
 DN 122:303115
 TI Composition and medium for holographic recording
 IN Toba, Yasumasa; Yamaguchi, Takeo; Yasuike, Madoka
 PA Toyo Ink Mfg Co, Japan
 SO Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07005796	A2	19950110	JP 1994-15021	19940209
PRAI	JP 1993-21525		19930209		

AB The title composition comprises (a) a thermosetting oligomer or polymer having ≥ 2 oxirane rings, (b) a compound having ≥ 1 polymerizable ethylenic unsatd. bonds, (c) a sensitizing dye, (d) a photopolymerization initiator, and (e) an epoxy resin polymerization catalyst with the difference in n between (a) and a polymer of (b) being ≥ 0.005 . An holog. medium is made by depositing the above composition on a transparent substrate. A holog. is formed by exposing the holog. medium to light, and applying heat or light.

IC ICM G03H001-02

ICS G03F007-004; G03F007-027; G03F007-029

CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 1680-21-3, Triethylene glycol diacrylate 3524-68-3, Pentaerythritol triacrylate 5888-33-5, Isobornyl acrylate 15625-89-5, Trimethylolpropane triacrylate 25068-38-6, Epikote 1009 33294-14-3, Epikote 5050 42594-17-2 163063-40-9, Epikote 180S50

RL: TEM (Technical or engineered material use); USES (Uses) (holog. recording composition from)

IT 33294-14-3, Epikote 5050

RL: TEM (Technical or engineered material use); USES (Uses)

(holog. recording composition from)

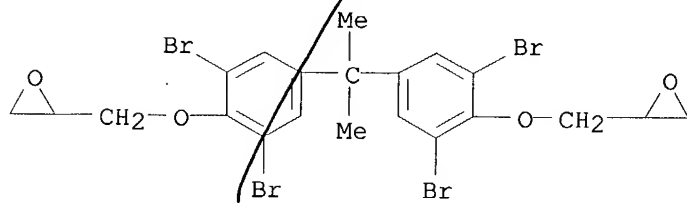
RN 33294-14-3 HCAPLUS

CN Oxirane, 2,2'-[(1-methylethylidene)bis[(2,6-dibromo-4,1-phenylene)oxymethylene]]bis-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 3072-84-2

CMF C21 H20 Br4 O4



L48 ANSWER 58 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1994:641956 HCAPLUS

DN 121:241956

TI Sealant composition for liquid crystal displays

IN Fukumoto, Kunihiro; Kojima, Kazuyuki; Shirahama, Yoshiharu

PA Kyoritsu Kagaku Sangyo, Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05295087	A2	19931109	JP 1992-122936	19920417
	JP 3162179	B2	20010425		
PRAI	JP 1992-122936		19920417		

AB The title sealant composition comprises (a) a partially acrylated- or methacrylated-epoxy resin obtained by the reaction between bisphenol A and acrylic acid or methacrylic acid, (b) an acrylate, a methacrylate, or their oligomer, (c) an epoxy resin, (d) a photopolymn.

initiator, and (e) a latent epoxy hardener, and its water-soluble ionic content is regulated to give an ionic conductivity $\leq 40 \mu\text{S}/\text{cm}$. By controlling the water-soluble ionic content in the sealant, high-quality liquid-crystal displays can be obtained readily with high productivity.

IC ICM C08G059-40

ICS C08G059-40; C08G059-18; C08L063-00; G02F001-1339; G09F009-35

ICA C08G059-17

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 42

IT **3253-39-2**, Bisphenol A dimethacrylate 157598-04-4,
Dichloropentynyl acrylate 157598-05-5, Bisphenol A dimethacrylate-
dichloropentynyl acrylate copolymer

RL: USES (Uses)

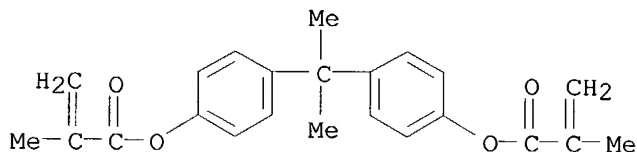
(sealant composition from, for liquid-crystal display)

IT **3253-39-2**, Bisphenol A dimethacrylate

RL: USES (Uses)

(sealant composition from, for liquid-crystal display)

RN 3253-39-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, (1-methylethylidene)di-4,1-phenylene ester
(9CI) (CA INDEX NAME)

L48 ANSWER 59 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1993:613998 HCAPLUS

DN 119:213998

TI **Photosensitive** thermosetting resin **composition** as
solder resist and patterning using sameIN Kamoshita, Hideaki; Oba, Yoichi; Iwasa, Sandai; Yuasa, Hitoshi; Sato,
Haruyoshi; Otsuki, Yutaka

PA Nippon Oil Co., Ltd., Japan; Asahi Chemical Research Laboratory Co., Ltd.

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04356051	A2	19921209	JP 1991-35617	19910204
	JP 2835539	B2	19981214		
PRAI	JP 1991-35617		19910204		

AB The title composition contains as essential components (a) a photosensitive **oligomer** obtained by reacting an alc. OH group-bearing α,β -unsatd. monocarboxylic acid ester HCR1:CR2CO2R3OH (R1, R2 = H, C1-6 organic residual group; R3 = C2-12 alkylene) with an acid anhydride group-containing conjugated diene polymer and/or copolymer prepared by the addition

reaction of a conjugated diene polymer and/or copolymer having a number-average mol. weight 500-5000 with an α,β -unsatd. dicarboxylic acid anhydride to ring opening ≥ 80 mol% of the anhydride groups of the adduct, (b) a **photopolymer. initiator(s)**, (c) an epoxy resin having >2 epoxy groups in the mol., and (d) 2,4-diamino-6-vinyl-s-triazine and/or 2,4-diamino-6-methacryloyloxyethyl-s-triazine. The title patterning comprises the steps of patternwise exposure of the **photosensitive thermosetting composition** coated on a printed circuit board, development, and thermosetting to form a solder resist pattern. The composition shows long shelf life and superior adhesiveness, elec. insulation, and heat resistance and produces resist patterns with high resolution

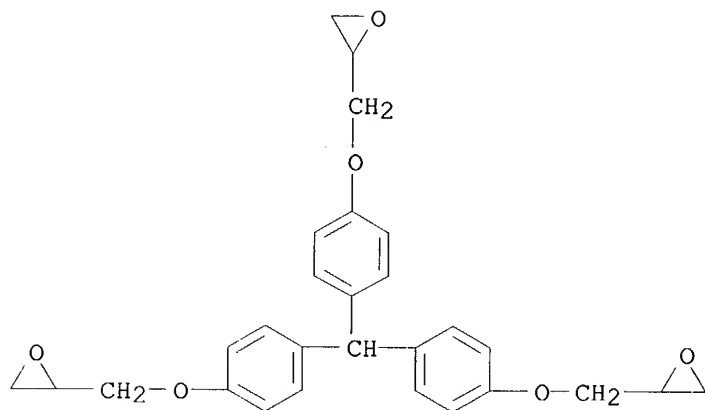
IC ICM G03F007-038

ICS C08F299-00; C08K005-3492; C08L063-00; G03F007-027; G03F007-028;
G03F007-032; H01L021-027; H05K003-06

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 2451-62-9, Triglycidyl isocyanurate 3194-70-5, 2, 4-Diamino-6-vinyl-s-triazine **34590-59-5**, EPPN 502 71868-10-5, Irgacure 907 82799-44-8, 2, 4-Diethylthioxanthone **89118-70-7**, YX 4000 106241-72-9 119912-97-9, Epiclon N 510 131406-13-8 150825-49-3, Epiclon EXA 4506 150825-50-6, Epiclon EXA 4621

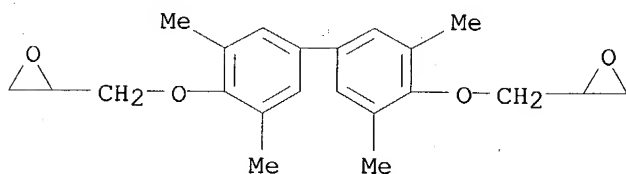
RL: USES (Uses)
 (photosensitive thermosetting solder resist containing)
 IT 34590-59-5, EPPN 502 89118-70-7, YX 4000
 RL: USES (Uses)
 (photosensitive thermosetting solder resist containing)
 RN 34590-59-5 HCAPLUS
 CN Oxirane, 2,2',2''-[methylidynetris(4,1-phenyleneoxymethylene)]tris-,
 homopolymer (9CI) (CA INDEX NAME)
 CM 1
 CRN 43224-82-4
 CMF C28 H28 O6



RN 89118-70-7 HCAPLUS
 CN Oxirane, 2,2'-[(3,3',5,5'-tetramethyl[1,1'-biphenyl]-4,4'-
 diyl)bis(oxymethylene)]bis-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 85954-11-6
 CMF C22 H26 O4



L48 ANSWER 60 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1993:505905 HCAPLUS
 DN 119:105905
 TI Alkali-developable **photosensitive compositions** useful
 as resists for making printed circuits
 IN Hiuga, Atsuyoshi; Harada, Motoyoshi
 PA Nippon Synthetic Chem Ind, Japan
 SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05027435	A2	19930205	JP 1991-180630	19910722
	JP 3012367	B2	20000221		
PRAI	JP 1991-180630		19910722		

AB The title comps. comprise (a) a CO₂H-containing thermoplastic resin, (b) a mixture of a urethane acrylic **oligomer** prepared by treating a polyester-polyol or polyether-polyol with a polyvalent isocyanate and subsequently with a (meth)acrylic monomer, a long chain polyalkylene glycol mono(meth)acrylate, and other ethylenic unsatd. monomer, and (c) a **photopolymer. initiator**. The comps. provide resists showing good adhesion to the substrate even when laminated on the substrate by using a pressing roller at varied temps.

IC ICM G03F007-027

ICS C08F299-02; C08F299-06; G03F007-027; G03F007-038; H01L021-027; H05K003-06

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 76

ST alkali developable photoresist resin compn; polyester polyol reactant photoresist; polyether polyol reactant photoresist; urethane acrylate **oligomer** photoresist; polyalkylene glycol acrylate photoresist

IT 15625-89-5 19812-60-3, Tetraethylene glycol monoacrylate 25035-69-2, Butyl acrylate-methacrylic acid-methyl methacrylate copolymer **41637-38-1**, 2,2-Bis[4-(methacryloxypolyethoxy)phenyl]propane 80215-00-5, Ethyl acrylate-2-ethylhexyl acrylate-methacrylic acid-methyl methacrylate copolymer 83133-75-9 126902-25-8 149368-78-5

RL: USES (Uses)

(alkali-developable photoresist containing)

IT **41637-38-1**, 2,2-Bis[4-(methacryloxypolyethoxy)phenyl]propane

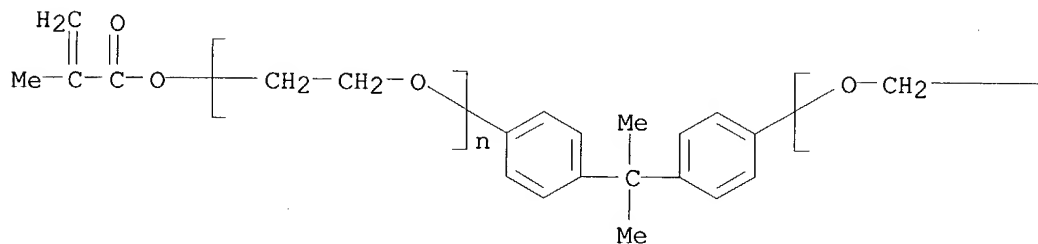
RL: USES (Uses)

(alkali-developable photoresist containing)

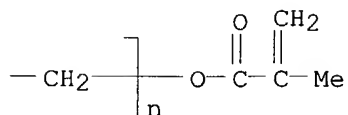
RN 41637-38-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α, α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -[(2-methyl-1-oxo-2-propenyl)oxy]]- (9CI) (CA INDEX NAME)

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PAGE 1-B



L48 ANSWER 61 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1993:213620 HCAPLUS

DN 118:213620

TI Structure-property relations in **polymerization**
photoinitiators. 7. **Photosensitizer/**
photoinitiator interactions in **polymerizable** media

AU Fouassier, Jean Pierre; Ruhlmann, Denis

CS Lab. Photochim. Gen. Ec. Natl. Syper. Chim., Mulhouse, 68093, Fr.

SO European Polymer Journal (1993), 29(4), 505-12

CODEN: EUPJAG; ISSN: 0014-3057

DT Journal

LA French

AB Interactions between a thioxanthone derivative used as a photosensitizer and a range of polymerization photoinitiators were investigated in low viscosity solvents and in photopolymerizable monomer/**oligomer** media. The acceptor mol. (the photoinitiator) and the polarity and the viscosity of the medium affect the rate constant of interaction, the quenching by the monomer, and the yield of the excitation transfer process. The high values (0.5-0.8) found match the well known efficiency of these combinations in industrial UV curing applications.

CC 35-3 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 37

IT Kinetics of **polymerization**

(photochem., of polyfunctional acrylates,

photoinitiator and **photosensitizer** in relation to)

IT 33041-41-7P 36446-02-3P, Trimethylolpropane triacrylate
 homopolymer 57592-66-2P, Pentaerythritol tetraacrylate homopolymer
 57592-67-3P, Hexanediol diacrylate homopolymer 58162-44-0P

~~67327-15-5P 92598-50-0P~~

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of, with crosslinking, photosensitizer effect on catalysts and kinetics for)

IT 33041-41-7P 58162-44-0P 67327-15-5P
 92598-50-0P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of, with crosslinking, photosensitizer effect on catalysts and kinetics for)

RN 33041-41-7 HCAPLUS

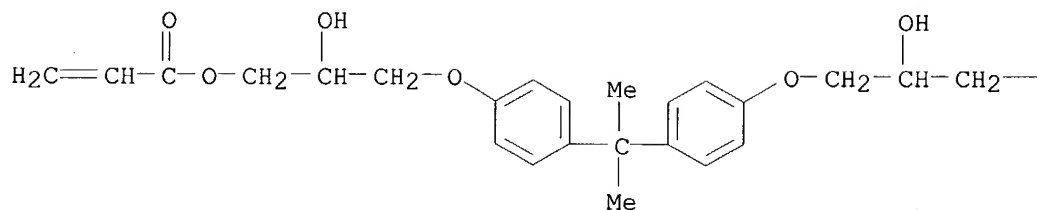
CN 2-Propenoic acid, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

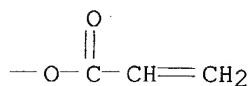
CRN 4687-94-9

CMF C27 H32 O8

PAGE 1-A



PAGE 1-B



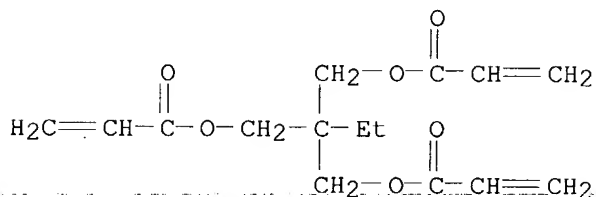
RN 58162-44-0 HCAPLUS

CN 2-Propenoic acid, 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 15625-89-5

CMF C15 H20 O6

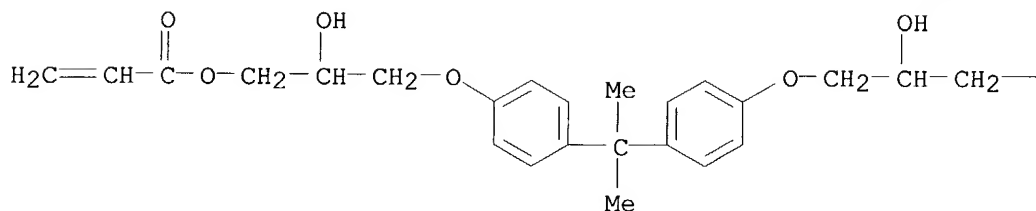


CM 2

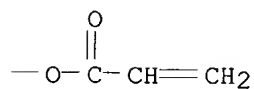
CRN 4687-94-9

CMF C27 H32 O8

PAGE 1-A



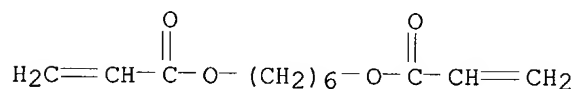
PAGE 1-B



RN 67327-15-5 HCAPLUS
 CN 2-Propenoic acid, 1,6-hexanediyl ester, polymer with (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

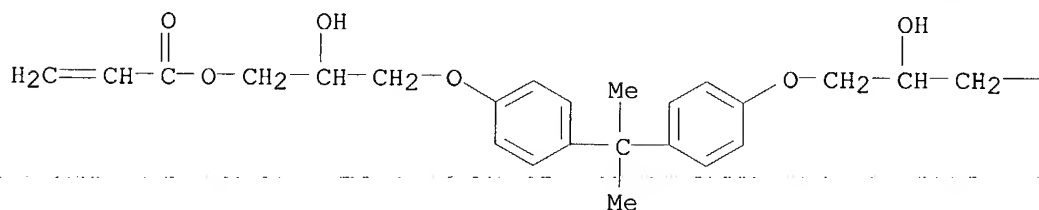
CRN 13048-33-4
 CMF C12 H18 O4



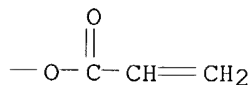
CM 2

CRN 4687-94-9
 CMF C27 H32 O8

PAGE 1-A



PAGE 1-B



RN 92598-50-0 HCAPLUS
 CN 2-Propenoic acid, 2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 4986-89-4
 CMF C17 H20 O8

≥1 epoxy group, and (d) **photopolymn initiator** or a photosensitizing agent; in which (a) 100, (b) 5-100, (c) 5-100, and (d) 0.1-30 weight parts.

IC ICM G03F007-038
ICS G03F007-038

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 76

ST **photosensitive resin compn** alk development;
semiconductor device photosensitive resin

IT Rubber, nitrile, uses
RL: USES (Uses)
(carboxy-terminated, alkaline development-type **photosensitive resin composition** containing)

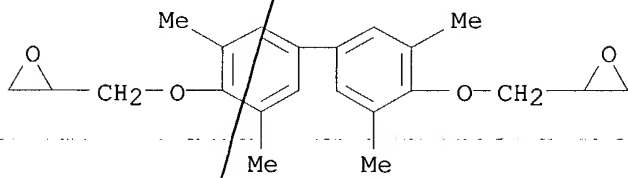
IT 2451-62-9, Triglycidylisocyanurate 9011-13-6, Styrene-maleic anhydride copolymer 55818-57-0D, reaction product with carboxylic acid
85954-11-6
RL: USES (Uses)
(Alkaline development-type **photosensitive resin composition** containing)

IT 9003-18-3
RL: USES (Uses)
(rubber, carboxy-terminated, alkaline development-type **photosensitive resin composition** containing)

IT **85954-11-6**
RL: USES (Uses)
(Alkaline development-type **photosensitive resin composition** containing)

RN 85954-11-6 HCAPLUS

CN Oxirane, 2,2'-[(3,3',5,5'-tetramethyl[1,1'-biphenyl]-4,4'-diyl)bis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



L48 ANSWER 63 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1992:48672 HCAPLUS

DN 116:48672

TI Photochemistry in viscous media: interaction between a photosensitizer and a photoinitiator

AU Fouassier, Jean Pierre; Ruhlmann, Denis

CS Lab. Photochim. Gen., Ec. Natl. Super. Chim., Mulhouse, 68093, Fr.

SO Journal of Photochemistry and Photobiology, A: Chemistry (1991), 61(1), 47-51
CODEN: JPPCEJ; ISSN: 1010-6030

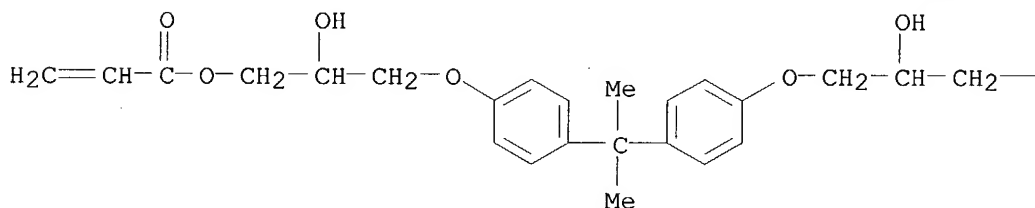
DT Journal

LA English

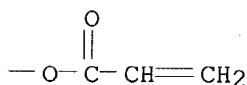
AB Excited state processes between a photosensitizer and photoinitiator are investigated for the first time in bulk monomer media. Both polarity and viscosity effects account for the rate consts of this interaction. A yield of 0.7 for a combination between a thioxanthone and a morpholino ketone derivative is calculated

CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 Section cross-reference(s): 34
 ST **photosensitizer photoinitiator** excited state process
polymn; triplet decay thioxanthone polymn photosensitizer;
 morpholino ketone thioxanthone photochem photophys
 IT Photochemistry
 (and photophysics, for photoinitiator-photosensitizer system consisting of thioxanthone derivative and morpholino ketone derivative in monomer and **oligomer**-monomer systems)
 IT **4687-94-9** 13048-33-4 15625-89-5
 RL: USES (Uses)
 (photoinduced excited state processes between photosensitizer and photoinitiator consisting of thioxanthone and morpholino ketone derivs. in monomer-**oligomer** system containing)
 IT **4687-94-9**
 RL: USES (Uses)
 (photoinduced excited state processes between photosensitizer and photoinitiator consisting of thioxanthone and morpholino ketone derivs. in monomer-**oligomer** system containing)
 RN 4687-94-9 HCAPLUS
 CN 2-Propenoic acid, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L48 ANSWER 64 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1991:666612 HCAPLUS
 DN 115:266612
 TI Photocrosslinked polymer compositions for optical disks
 AU Rot, A. S.; Zaks, I.
 CS Inst. Materialoved., USSR
 SO Polimery (Warsaw, Poland) (1991), 36(3), 101-4
 CODEN: POLIA4; ISSN: 0032-2725
 DT Journal
 LA Polish
 AB Photocrosslinked polymer comps. were studied suitable for preparation of optical disks. For relief-forming and protective layers the most important were structural properties and ratio of multifunctional acrylate monomers and epoxy acrylate **oligomers** in the photocrosslinking

composition For high quality substrates and memory devices the most suitable were compns. containing **oligomeric** carboxymethacrylates of polyhydric alcs.

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 6175-45-7 21983-73-3 24650-42-8, 2,2-Dimethoxy-2-phenylacetophenone
54149-75-6 54149-76-7 68109-57-9 81427-76-1

RL: USES (Uses)

(**photocrosslinking polymeric** composition containing **photoinitiator** of, for optical recording disk fabrication)

IT **24448-20-2**

RL: USES (Uses)

(photocrosslinking polymeric composition containing, for optical recording disk fabrication)

IT 1070-70-8 4074-88-8 13048-33-4 **24447-78-7** 122157-45-3, EAS
655 133346-14-2 133346-15-3 137463-03-7

RL: USES (Uses)

(photocrosslinking polymeric composition containing, for optical recording disk fabrication, properties of)

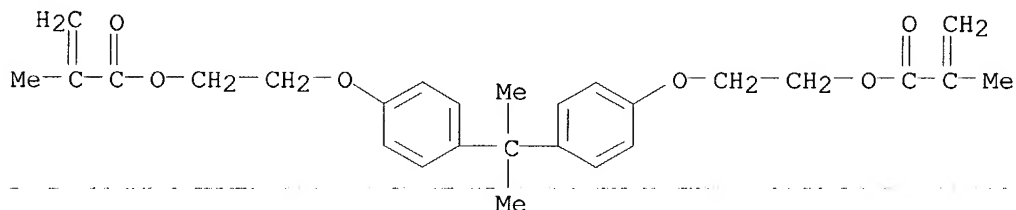
IT **24448-20-2**

RL: USES (Uses)

(photocrosslinking polymeric composition containing, for optical recording disk fabrication)

RN 24448-20-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) ester (9CI) (CA INDEX NAME)



IT **24447-78-7**

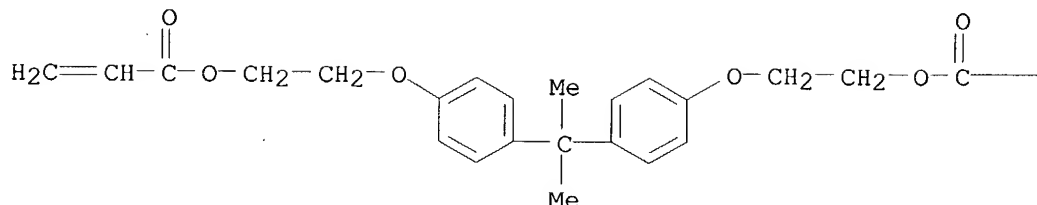
RL: USES (Uses)

(photocrosslinking polymeric composition containing, for optical recording disk fabrication, properties of)

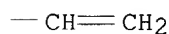
RN 24447-78-7 HCAPLUS

CN 2-Propenoic acid, (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) ester (9CI) (CA INDEX NAME)

PAGE 1-A

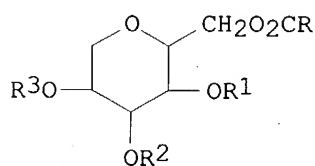


PAGE 1-B



L48 ANSWER 65 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1991:584890 HCAPLUS
 DN 115:184890
 TI Thermosetting and photocurable acrylic adhesives for printed circuit boards
 IN Terada, Ikuta; Okada, Taisuke; Suzuki, Kazuo; Omori, Eiji; Fukazawa, Masato
 PA Hitachi Chemical Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03039378	A2	19910220	JP 1989-173378	19890705
PRAI	JP 1989-173378		19890705		
GI					



I

AB The title adhesives comprise 100 parts mixture of (meth)acrylate oligomers and/or monomers, photosensitizers, and polymerization initiators and 3-20 parts fillers containing the nonionic surfactants I [R = fatty acid residue; R1-3 = (CH2CH2O)nH, n = 20-100] and powdered SiO2 (average diameter <1 μm). Thus, 100 parts mixture of

EA-800 (epoxy acrylate) 420, 2,2-bis[4-(acryloxydiethoxy)phenyl]propane 330, dipentaerythritol hexaacrylate 110, 2-hydroxyethyl methacrylate 140, tert-BuOOBz 40, and PhCOC(OMe)2Ph 10 parts was mixed with Tween-20 3, SiO2

4, and talc 50 parts to give an adhesive with viscosity 1900 and 1500 P, and thixotropy 4.8 and 4.2, after 0 and 5 days at 40°, resp., and adhesion in bonding a ceramic condenser on a printed circuit board 2.7 kg; vs. 2100, 1100, 4.9, 2.9, and 2.5, resp., without Tween 20.

IC ICM C09J004-02
ICS C09J005-00; H05K003-34
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 76
IT **136666-75-6**
RL: TEM (Technical or engineered material use); USES (Uses)
(adhesives, thermosetting and photocurable, for printed circuit boards)
IT **136666-75-6**
RL: TEM (Technical or engineered material use); USES (Uses)
(adhesives, thermosetting and photocurable, for printed circuit boards)
RN 136666-75-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with
(1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl-2,1-ethanediyl)
di-2-propenoate, NK Ester EA 800 and 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-
bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-
propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX
NAME)

CM 1

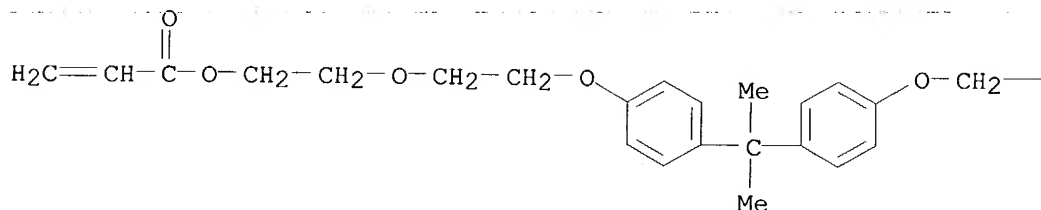
CRN 105054-12-4
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

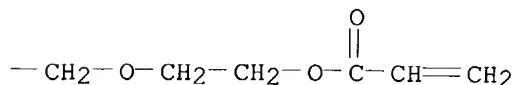
CM 2

CRN 56361-55-8
CMF C29 H36 O8

PAGE 1-A



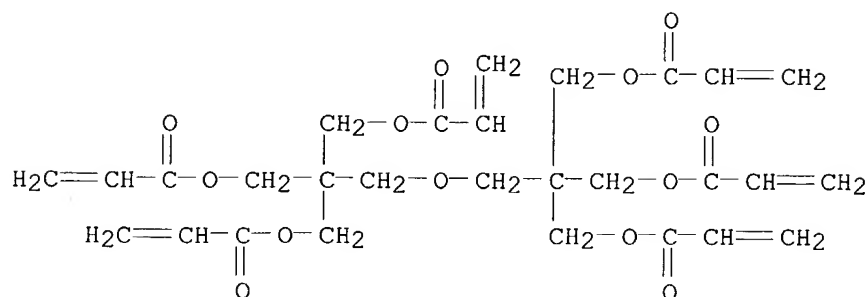
PAGE 1-B



CM 3

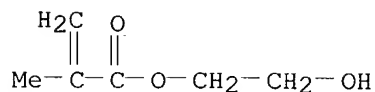
CRN 29570-58-9

CMF C28 H34 O13



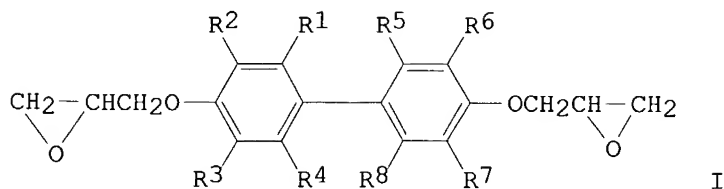
CM 4

CRN 868-77-9
CMF C6 H10 O3



L48 ANSWER 66 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1991:502849 HCAPLUS
 DN 115:102849
 TI Alkali-developable UV **photosensitive composition** for solder resist
 IN Iwaya, Yoshiaki; Imazu, Hideki; Hosoda, Masahiro; Hioki, Masanobu; Tanaka, Chikafumi
 PA Konica Co., Japan
 SO Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 02247654	A2	19901003	JP 1989-68192	19890320
PRAI	JP 1989-68192		19890320		
GI					



AB The title composition comprises (a) an alkali-developable polymer or **oligomer** having carboxy groups and vinyl groups in the same mol. 100, (b) a biphenyl epoxy compound I (R1-R8 = H, C1-3 alkyl) 10-200, (c) a photopolymerizable monomer or **oligomer** 5-50, and (d) a **photopolymn. initiator** or sensitizer 1-30 weight parts.

IC ICM G03F007-027
ICS C08G059-18; G03F007-038

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

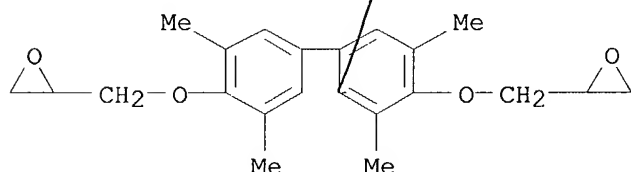
ST solder resist alkali developing polymer; UV **photosensitive compn** solder resist

IT 108-30-5D, Succinic anhydride, reaction products with bisphenol A-based epoxy acrylate resins 3524-68-3, Pentaerythritol triacrylate 29570-58-9 **85954-11-6** 135390-76-0
RL: USES (Uses)
(alkali-developable UV photosensitive compns. containing, for solder resists)

IT **85954-11-6**
RL: USES (Uses)
(alkali-developable UV photosensitive compns. containing, for solder resists)

RN 85954-11-6 HCAPLUS

CN Oxirane, 2,2'-[(3,3',5,5'-tetramethyl[1,1'-biphenyl]-4,4'-diyl)bis(oxyethylene)]bis- (9CI) (CA INDEX NAME)



L48 ANSWER 67 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1991:45079 HCAPLUS

DN 114:45079

TI Ultraviolet rays-curable acrylic compositions

IN Aikawa, Naoyuki

PA Atsugi Chuo Kenkyusho K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 02182714	A2	19900717	JP 1989-1239	19890109
PRAI	JP 1989-1239		19890109		

AB The title compns. comprise ≥ 1 acryloyl-containing photopolymerizable low mol. weight compds. and/or **oligomers**, polyenes, polythiols, radially reactive photopolymn. initiators having absorption at 300-450 nm, organic peroxide radical polymerization initiators having 1 h half life temperature 50-90°, azo compound radical polymerization initiators having 1 h half life temperature 40-70°, storage stabilizers, and $\geq 10\%$ (based on total of resin) pigments (the coatings or moldings with ≤ 5 mm thickness are cured by UV irradiation). Thus, trimethylolpropane triacrylate 50,

Kayarad R 551 50, TiO₂ 20 parts were mixed, then kneaded with 1% (based on resin) 2,4-diethylthioxanthone and 2% di(2-ethylhexyl) peroxydicarbonate, spread 0.5-mm thick on an acrylic plate, and irradiated with UV at 120 W/cm and 15 cm distance to give a cured film having (JIS K5401) pencil hardness 2H.

IC ICM C08F299-00

ICS C08F002-48

CC 42-7 (Coatings, Inks, and Related Products)

Section cross-reference(s): 38

IT Coating materials

(UV-curable, acrylic compns., containing photopolymerization initiators and radical polymerization initiators and pigments)

IT 119846-20-7

RL: TEM (Technical or engineered material use); USES (Uses)
(coatings, containing polymerization initiators, UV-curable)

IT 119846-20-7

RL: TEM (Technical or engineered material use); USES (Uses)
(coatings, containing polymerization initiators, UV-curable)

RN 119846-20-7 HCAPLUS

CN 2-Propenoic acid, 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with α, α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

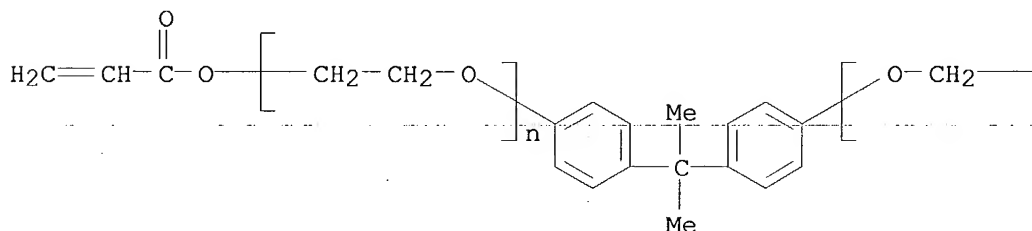
CM 1

CRN 64401-02-1

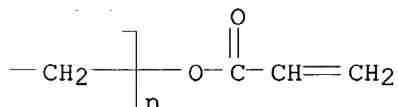
CMF (C₂ H₄ O)_n (C₂ H₄ O)_n C₂₁ H₂₀ O₄

CCI PMS

PAGE 1-A



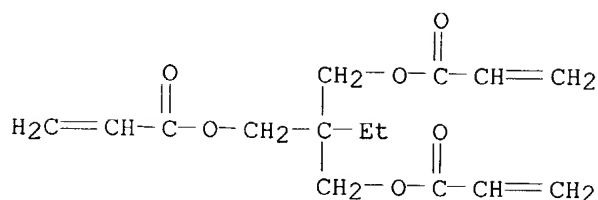
PAGE 1-B



CM 2

CRN 15625-89-5

CMF C₁₅ H₂₀ O₆



L48 ANSWER 68 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1990:88366 HCAPLUS

DN 112:88366

TI Wetting-free lithographic printing plates

IN Kita, Nobuyuki

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 01214839	A2	19890829	JP 1988-40194	19880223
	JP 2626987	B2	19970702		
PRAI	JP 1988-40194		19880223		

AB In the title plates having a photosensitive layer and a silicone rubber layer (that utilizes crosslinking by SiH group and ethylene group), the photosensitive layer contains (a) water-swelling or water-soluble film-forming polymer having ≥ 2 photopolymerizable ethylenic group in the side chain, (b) optional monomer or **oligomer** with ≥ 1 photopolymerizable ethylenic group, and (c) **photopolymn**. **initiators**. This photosensitive layer provides firm adhesion with the silicone rubber layer that does not weaken during storage. Thus, a primed and dyed Al substrate was coated with a composition containing 2:8 (mol.) methacrylic acid-vinyl methacrylate copolymer 2, (CH₂:CHCO₂CH₂CHOHCH₂OCH₂)₂CHOH 0.6, **photopolymn**. **initiators**, and dyes. This layer was coated with a silicone rubber composition containing α,ω -divinylpolydimethylsiloxane 90, α,ω -dimethylpolymethylhydrogen polysiloxane 6, styrene-modified dimethylsiloxane 0.5, Pt-containing catalyst, and other agents to obtain a plate, which was covered with a PET cover film. Imagewise exposure, removal of cover film, and development with developer containing PhCH₂OH, Na isopropyl naphthalenesulfonate, and Na₂CO₃ gave lithog. plates that showed excellent printability.

IC ICM G03C001-00

ICS G03C001-68; G03F007-02

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

ST lithog plate wetting free; **photosensitive compn** lithog printing plate; silicone rubber layer lithog plate

IT 115168-59-7 115168-69-9 121198-23-0

RL: USES (Uses)

(**photopolymn**. **initiator**, wetting-free lithog. plates containing)

IT 1067-53-4 3524-68-3, Pentaerythritol triacrylate 60453-84-1
72063-21-9 105650-05-3, Epoxyester 3002A 119757-67-4

121188-66-7

RL: USES (Uses)

(photosensitive layer of lithog. plates containing, good adhesion to silicone rubber layer)

IT 105650-05-3, Epoxyester 3002A

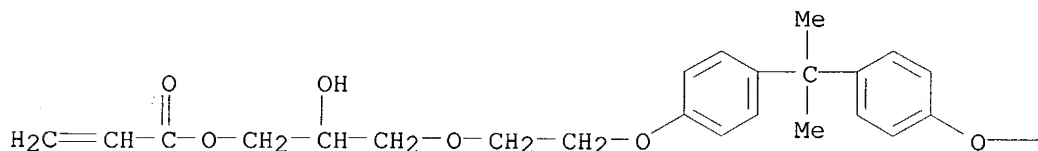
RL: USES (Uses)

(photosensitive layer of lithog. plates containing, good adhesion to silicone rubber layer)

RN 105650-05-3 HCAPLUS

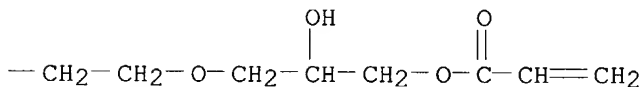
CN 2-Propenoic acid, (1-methylethylidene)bis[4,1-phenyleneoxy(methyl-2,1-ethanediyl)oxy(2-hydroxy-3,1-propanediyl)] ester (9CI) (CA INDEX NAME)

PAGE 1-A



2 (D1-Me)

PAGE 1-B



L48 ANSWER 69 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1989:115927 HCAPLUS

DN 110:115927

TI Addition-polymerizable composition containing a ternary photoinitiator system and its polymerization

IN Palazzotto, Michael C.; Ubel, Andrew F., III; Oxman, Joel D.; Ali, Zaki M.

PA Minnesota Mining and Manufacturing Co., USA

SO Eur. Pat. Appl., 19 pp.

CODEN: EPXXDW

DT Patent

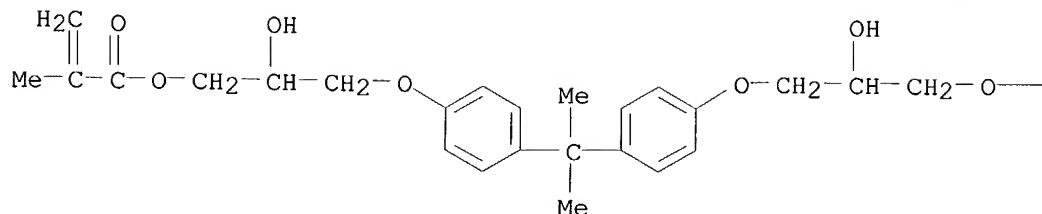
LA English

FAN.CNT 1

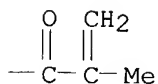
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 290133	A2	19881109	EP 1988-302778	19880329
	EP 290133	A3	19900502		
	EP 290133	B1	19981028		
	R: CH, DE, FR, GB, IT, LI, SE				
	CA 1323949	A1	19931102	CA 1988-562679	19880328
	BR 8801531	A	19881108	BR 1988-1531	19880330
	JP 63273602	A2	19881110	JP 1988-81169	19880401
	JP 2744789	B2	19980428		

US 5545676 A 19960813 US 1994-365494 19941228
 US 6017660 A 20000125 US 1998-94184 19980609
 PRAI US 1987-34065 19870402
 US 1992-840880 19920225
 US 1994-365494 19941228
 US 1996-695566 19960812
 OS MARPAT 110:115927
 AB The title compns., with good cure speed, cure depth, and shelf life, comprise radically **polymerizable** monomers and a **photoinitiator** system containing arylodonium salts, **photosensitizers** [absorbing in the range 300-1000 nm and sensitizing 2-methyl-4,6-bis(trichloromethyl)-s-triazine], and electron donors with oxidation potential (Eox) such that $0 < E_{ox} \leq 1.32$ (V, vs. SCE). A mixture of 11.85 parts each triethylene glycol dimethacrylate and bisphenol A diglycidyl ether dimethacrylate, 76 parts filler, and 0.25 part each camphorquinone (I), Ph2I+PF6- (II), and (dimethylamino)phenethyl alc. (III) was poured in a mold to 6 mm depth and cured 20 s with visible light, giving a composite with Barcol hardness 60 (top) and 30 (bottom), vs. no cure with I and II only and 56 and 2, resp., with I and III only.
 IC ICM C08F002-50
 ICS G03C001-68; A61K006-08
 CC 37-3 (Plastics Manufacture and Processing)
 Section cross-reference(s): 63
 IT 108-30-5DP, reaction products with hydroxyethyl methacrylate and polycaprolactone hexaol and TDI, polymers with pentaerythritol tetraacrylate 584-84-9DP, reaction products with hydroxyethyl methacrylate and polycaprolactone hexaol and succinic anhydride, polymers with pentaerythritol tetraacrylate 868-77-9DP, reaction products with polycaprolactone hexaol and succinic anhydride and TDI, polymers with pentaerythritol tetraacrylate 4986-89-4DP, polymers with urethane **oligomers** 25034-58-6P, Acrylamide-N,N'-methylenebisacrylamide copolymer **26426-05-1P** 57592-66-2P, Pentaerythritol tetraacrylate homopolymer 79469-03-7DP, reaction products with hydroxyethyl methacrylate and succinic anhydride and TDI, polymers with pentaerythritol tetraacrylate 119176-65-7P, 1,4-Butanediol dimethacrylate-trimethylolpropane trimethacrylate copolymer
 RL: PREP (Preparation)
 (manufacture of, ternary photoinitiator systems for)
 IT **26426-05-1P**
 RL: PREP (Preparation)
 (manufacture of, ternary photoinitiator systems for)
 RN 26426-05-1 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediylbis(oxy-2,1-ethanediyl) ester, polymer with (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)
 CM 1
 CRN 1565-94-2
 CMF C29 H36 O8

PAGE 1-A

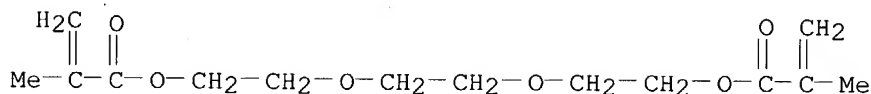


PAGE 1-B



CM 2

CRN 109-16-0
CMF C14 H22 O6



L48 ANSWER 70 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1988:456257 HCAPLUS
DN 109:56257
TI Photocurable polyhydroxy polyether-based adhesives
IN Suzuki, Setsuo; Takasu, Nobutaka; Murayama, Mitsumoto
PA Sumitomo Bakelite Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF

DT Patent
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 63083182	A2	19880413	JP 1986-227167	19860927
	JP 08006070	B4	19960124		
PRAI	JP 1986-227167		19860927		

AB Adhesives with good heat and solvent resistance, useful in laminating films or preparing metal-clad flexible laminates, are prepared from high-mol.-weight polyhydroxy polyethers; urethane, epoxy, polyester, and/or polyether (meth)acrylate **oligomers**; (meth)acrylic monomers; 1-[4-(hydrocarbylthio)phenyl]-2-methyl-2-morpholino-1-propanone initiators; C1-4 alkyl or halo derivs. of thioxanthone as sensitizers; and solvents. A polyhydroxy polyether (Pheno Tohto YP 50) 40, Ripoxy SP-1509 40, trimethylolpropane triacrylate 7, 4-MeSC6H4COCMe2Q (Q = morpholino) 1.7, 2,4-diethylthioxanthone (I) 1.3, Me Cellosolve acetate 127, and BuOAc 117 parts were coated on a 125- μ m polyether-polyimide film, dried 5 min

at 80°, laminated with a 35-μm Cu foil at 80° and 1 kg/cm², and irradiated with UV radiation from the film side to give a laminate having peel strength 2.3 and 2.0 kg/cm before and after heating 1 h at 200°, resp., vs. 1.1 and separated, resp., for a laminate using an adhesive without I.

IC ICM C09J003-14

ICS C09J003-14

ICA C08F002-50

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 56

IT 25068-38-6, Pheno Tohto YP 50 92598-50-0

RL: USES (Uses)

(adhesives containing, photocurable, for metal foil-plastic film lamination)

IT 71868-10-5, 2-Methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one

RL: USES (Uses)

(polymerization initiators, photocurable

adhesives containing, for metal foil-plastic film lamination)

IT 92598-50-0

RL: USES (Uses)

(adhesives containing, photocurable, for metal foil-plastic film lamination)

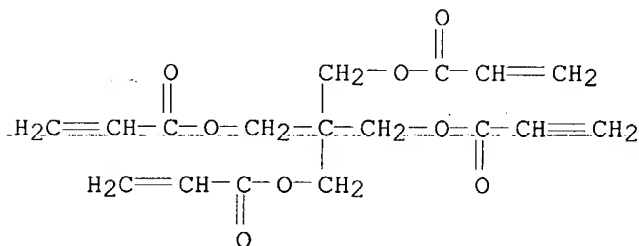
RN 92598-50-0 HCAPLUS

CN 2-Propenoic acid, 2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 4986-89-4

CMF C17 H20 O8

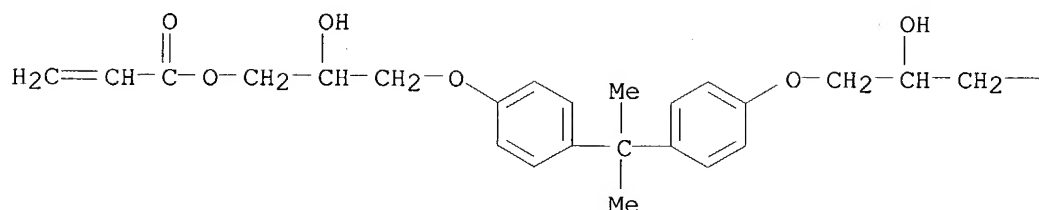


CM 2

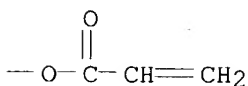
CRN 4687-94-9

CMF C27 H32 O8

PAGE 1-A



PAGE 1-B



- L48 ANSWER 71 OF 71 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1983:523389 HCAPLUS
 DN 99:123389
 TI Ultra-fast polymerization of epoxy-acrylate resins by pulsed laser irradiation
 AU Decker, Christian
 CS Lab. Photochim. Gen., Ec. Natl. Super. Chim., Mulhouse, 68093, Fr.
 SO Journal of Polymer Science, Polymer Chemistry Edition (1983), 21(8), 2451-61
 CODEN: JPLCAT; ISSN: 0449-296X
 DT Journal
 LA English
 AB The 337.1-nm emission of a pulsed N laser initiated the crosslinking polymerization of Ebecryl 605A [84593-14-6] photoresists effectively. The extent of curing was determined from the amount of insol. polymer formed and by the decrease in IR absorption of the reactive double bond at 810 cm⁻¹. With the large power d. available in the laser pulse (0.5 MW cm⁻²) rates of polymerization $\leq 108 \text{ mol L}^{-1} \text{ s}^{-1}$ were observed in the presence of air. Quantum yield measurements indicated that each photon absorbed could create ≤ 450 crosslinks; the kinetic chain length was .apprx.4000 double bonds polymerized per initiating radical. During the induction period due to oxygen inhibition each photoinitiator radical consumed 1 O₂ mol. The influence of the monomer and photoinitiator used on the sensitivity of the resin was examined; the best performing formulation contained the epoxy-acrylate **oligomer**, pentaerythritol triacrylate [3524-68-3], and 2,2-dimethoxy-2-phenylacetophenone [24650-42-8] photoinitiator. All the formulations studied could be cured by a single 500-kW laser pulse of 8 ns duration, provided that the irradiation was carried out in an inert atmospheric or with a focused laser beam.
 CC 37-3 (Plastics Manufacture and Processing)
 Section cross-reference(s): 74
 IT Kinetics of crosslinking
 Kinetics of **polymerization**
 (**photochem.**, of epoxy acrylates, laser-initiated)
 IT 3524-68-3 15625-89-5 25085-99-8 42978-66-5
 RL: USES (Uses)
 (photoresist compns. containing, ultrafast polymerization of)
 IT 25085-99-8

RL: USES (Uses)

(photoresist compns. containing, ultrafast polymerization of)

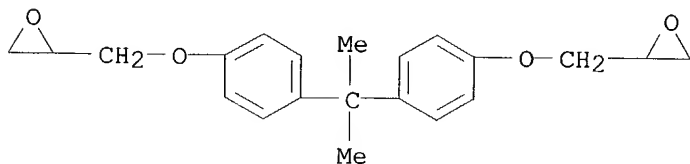
RN 25085-99-8 HCAPLUS

CN Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-,
homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 1675-54-3

CMF C21 H24 O4



=>